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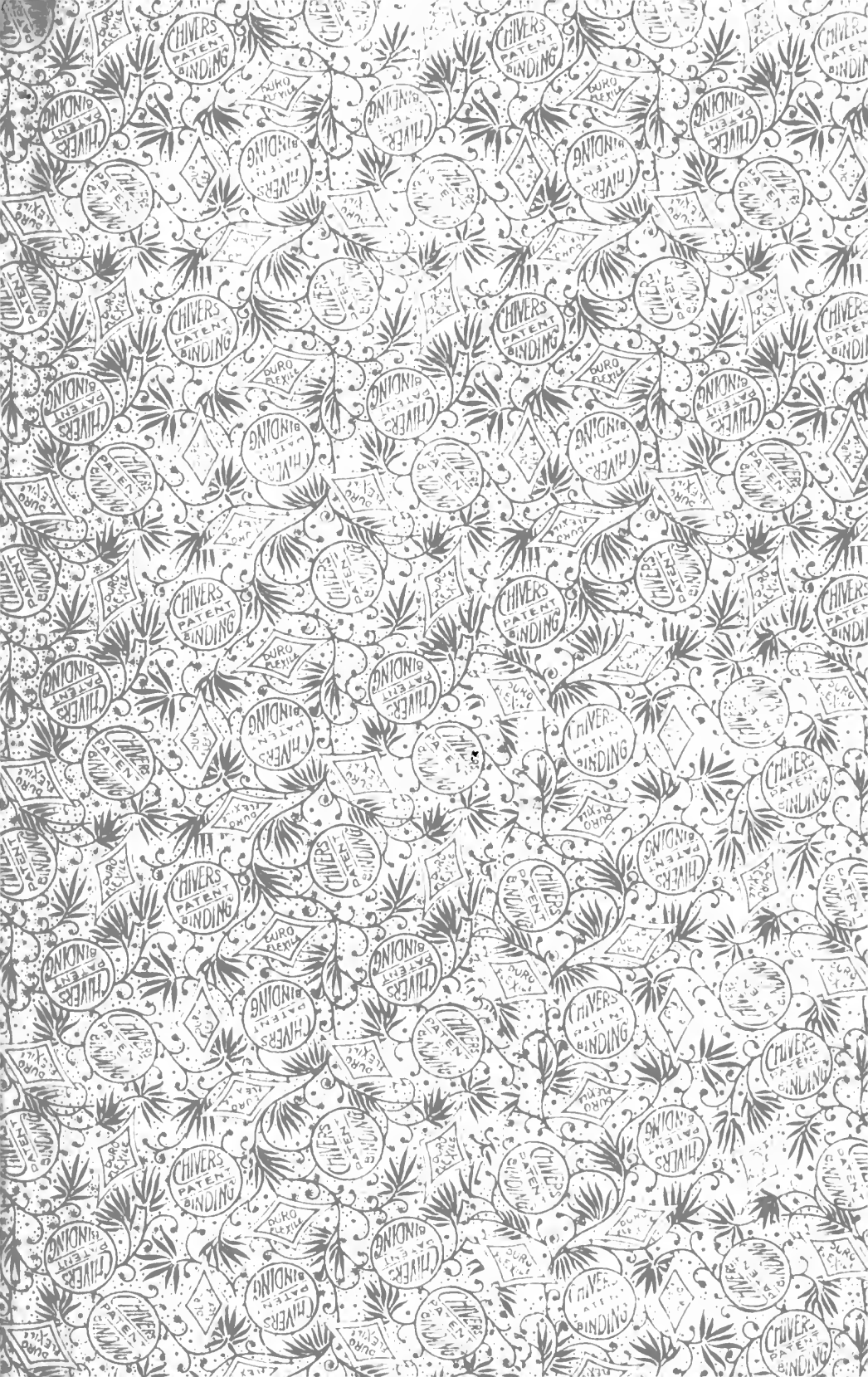
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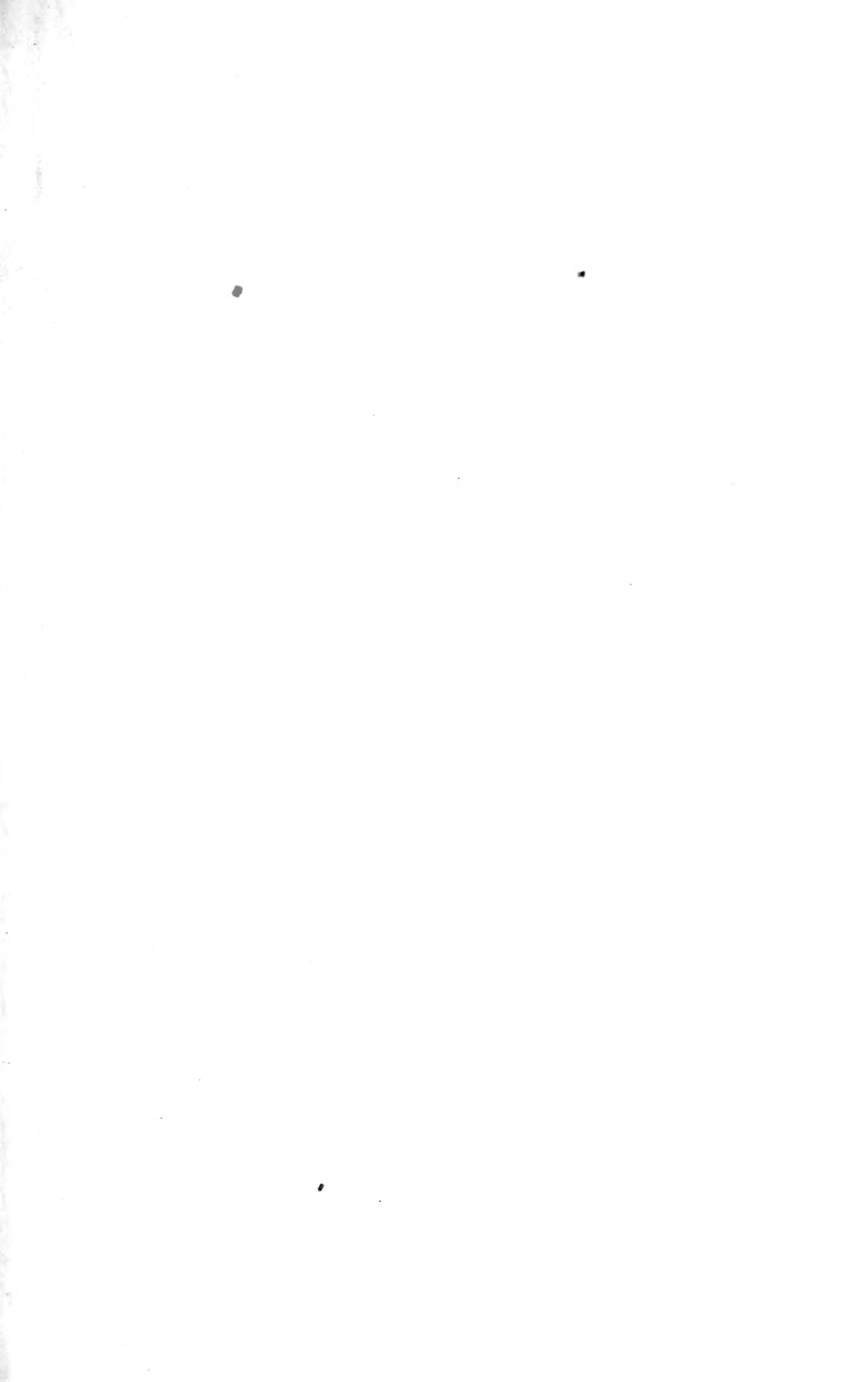
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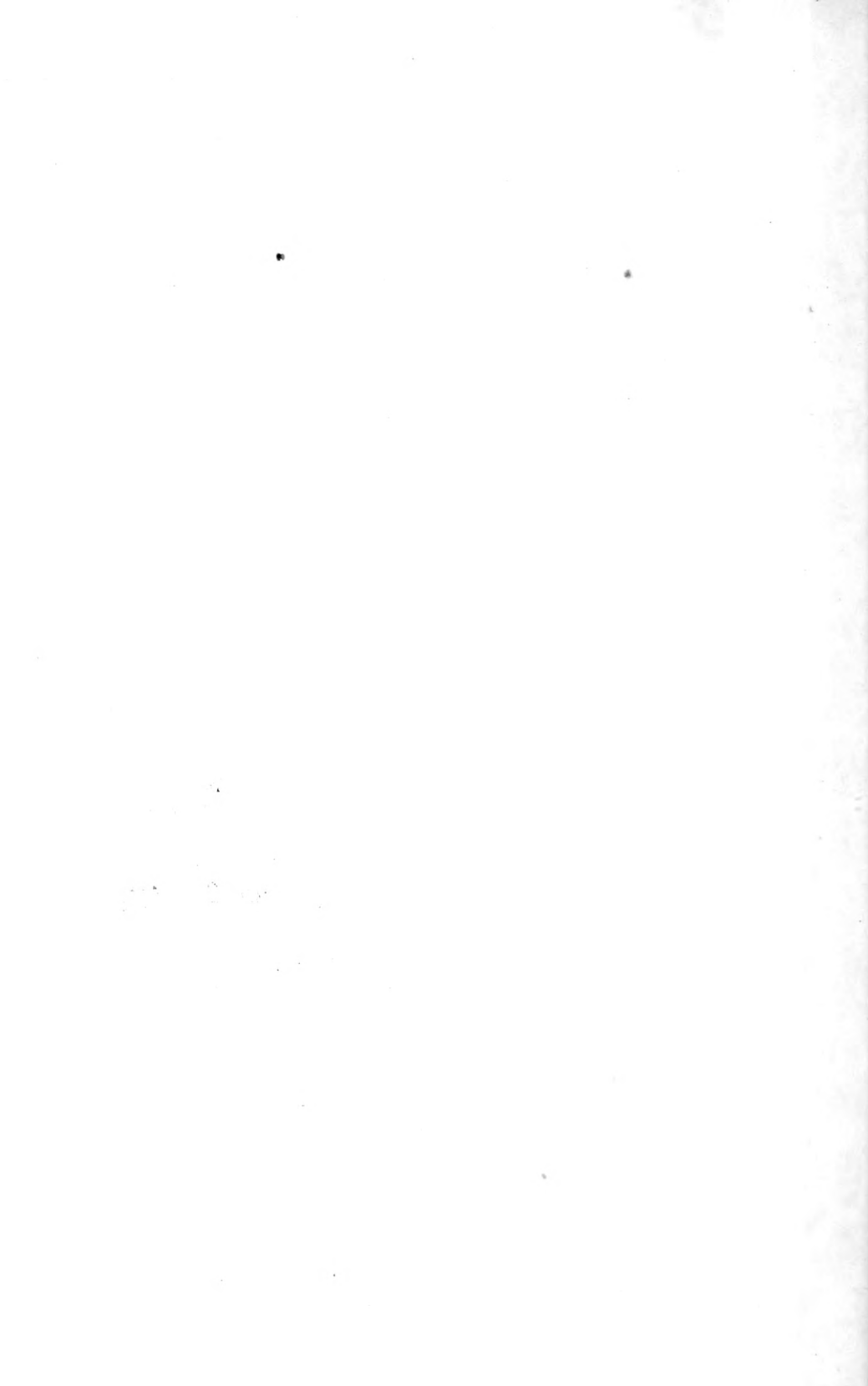
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THE BRITISH JOURNAL OF DERMATOLOGY AND SYPHILIS

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THE BRITISH JOURNAL OF DERMATOLOGY AND SYPHILIS.

JANUARY-MARCH, 1917.

THE NEW TITLE OF THE JOURNAL.

With the present number this Journal adds to its title and becomes THE BRITISH JOURNAL OF DERMATOLOGY AND SYPHILIS. In view of the place which syphilis holds in dermatological work, it is felt that that disease ought to be explicitly recognised in the title of the organ of British dermatology, as it is in the title of the organ of American dermatology—*The Journal of Cutaneous Diseases, Including Syphilis*. The change thus made is in harmony with a recommendation of the Royal Commission on Venereal Diseases to the teaching authorities of the profession. Impressed with the frequency with which syphilitic rashes go unrecognised, and the deplorable results of this failure in diagnosis, the Royal Commission urged that arrangements be made whereby every medical student should attend a course of instruction in skin diseases. That recommendation points to the true conception of syphilis as a disease that requires to be treated in the stage when the symptoms are predominantly dermatological. It is not forgotten that, if neglected, this disease which begins with a lesion of the skin or mucous membrane may extend far beyond the integuments and assail and damage organ after organ. In that sense it ranks as one of the most pervasive of affections, which may tax the skill and resources of almost every branch of medicine in turn. None the less true is it that when diagnosed in its earliest stage, before any constitutional symptoms have been evoked, its disastrous excursions may

usually be inhibited. The view which regards it as belonging to the province of dermatology has therefore practical implications of the first importance.

Names are more than mere counters: they have symbolic value; they are charged with an influence of suggestion which is in constant exercise, and they promote the cause of truth in the measure of their accuracy and appositeness. The most advanced authorities on pulmonary tuberculosis are no longer willing to speak of that disease as phthisis. The essential thing, as they insist, is to detect and treat it in its earliest phase and so prevent it from ever reaching the wasting stage, and therefore they replace the ordinary name with a designation free of misleading suggestion. Similarly, the addition now made to the title of this Journal will tend to emphasise the fact that in syphilis the great desideratum is that it should be diagnosed and brought under treatment before it has had time to establish itself as a constitutional affection.

MALCOLM MORRIS.

ANNOUNCEMENT.

Owing to the increased cost of paper and printing it has been decided, under the present abnormal conditions, to suspend the privilege, which authors have enjoyed in the past, of receiving a small number of free reprints of their articles. They may, however, obtain reprints of their articles, at their own expense, on giving notice to the Publishers on receipt of the proofs. The scale of charges for reprints will be supplied on application to the Publishers.

It is now necessary to deliver to the engraver an equivalent weight of old copper to that used for all new blocks required. It has, therefore, been decided to dispose of the old blocks in the possession of the Journal to help towards meeting this requirement.

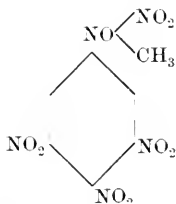
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THE PROPERTIES OF TETRYL.

(AS AFFECTING THE HUMAN SYSTEM.*)

By LUCY CRIPPS, M.B., B.Ch.Ed., D.P.H.CANTAB.

THE aromatic hydrocarbons benzene and its homologues have an injurious action on the human system. The effect of the nitro bodies is roughly proportional to the number of nitro groups. Thus we have toluene, mononitrotoluene and trinitrotoluene exhibiting toxic properties in ascending degree. Further, the chloro-nitro compounds are still more dangerous, making it appear that toxic action depends on the negative or acidic character of the aryl body concerned. Chemically tetryl is trinitro-phenyl-methyl-nitramine, although its name is derived from tetra-nitro-methyl-aniline, the constitution formerly ascribed to it. It can be made by nitrating methyl aniline in the usual manner.



Aniline is a substituted ammonia, *i. e.* it is ammonia with one of its hydrogen atoms substituted by a phenyl radicle, the latter being acidic in function, hence the basicity of aniline is less than that of ammonia. The methyl aniline is still more basic, as methyl groups are basic in character. By nitration the basicity is more than neutralised, and that in proportion to the number of nitro groups, tetryl, which is free from acid, exhibits an acid reaction, and its water solution will neutralise alkalies.

Tetryl is met with in four different forms :

- (a) Ground powder.
- (b) Very fine crystals.
- (c) Larger crystals.
- (d) Granular masses.

* I am indebted to G. S. Heaven, Esq., B.Sc., for his generous assistance *re* the chemical properties of tetryl, and to J. J. Ward, Esq., for photographing my cases.

The colour varies, as would be expected, with the size of the particles, the ground powder being pale yellow, and large crystals a deep orange. Normally the substance appears quite dry, and is non-pungent, but occasionally the larger crystals appear moist, have a very dark colour, and possess a pungent odour. There is some evidence that the properties of the substance are affected by residual solvent, probably benzol, and traces of thiophene have been found. The melting-point of tetryl is about 129° – 130° C., and the action of light is to deepen its yellow colour. It is slightly soluble in water, and much more freely soluble in ammonia. When dissolved in ammoniacal liquid it gives rise to a claret coloration. The chief solvents are benzol and acetone.

It is common knowledge that persons having a moist skin are more affected by tetryl, T.N.T., etc., than those whose skins are dry. Mere moisture, however, does not explain the effects of the substance. The darkening of the skin was at first attributed to the effect of light on the absorbed crystals, and undoubtedly this is a factor in producing the colour. But insolation is not the only ætiological factor, as the alkalinity of the sweat also accounts for the coloration. Too much stress cannot be laid on the fact that the discoloration of the skin is not permanent. In what form the absorbed crystals are eliminated from the body is unknown, but persons so discoloured regain their normal coloration absolutely if completely removed from tetryl. Sweat being normally alkaline forms a good solvent, and the alkalinity, amount and distribution of the sweat of the operators are always under observation.

As stated above, the nitrobenzene and toluene are more toxic as the number of negative groups increase—in other words, the more acidic the substance, the more toxic the effect. Tetryl, therefore, by reason of its negative character is less active in the sense that it has not been known to produce death, though the local effects of tetryl are very pronounced.

It has been stated that benzene is found in the blood of persons affected by nitrobenzene, so the effects produced by various explosive substances may depend on the decomposition products, the formation of these decomposition products being directly responsible for the pathological effects. What these products are in the case of tetryl is unknown, but either they are less toxic, or the amount formed is negligible.

The skin-lesions produced by tetryl of necessity must be classified under traumatic inflammation. The kinds of tetryl which affect the operators more are the fine powdery form and the large, moist, dark-coloured crystals. The reason for their objection to the former is obviously that a greater amount of it must get into the air, and they thus get covered with a powder which can get at all exposed and partially exposed parts of the body. Friction then comes into play. This mechanical action would probably produce but little effect if it were not for the solubility of the tetryl in the alkaline sweat, and in all cases the occurrence, distribution and severity of the rashes vary directly with the amount and alkalinity of the sweat. It has also been observed that patients who are accustomed to take alcohol suffer more acutely with the skin eruption. The permeability of the skin is also a contributory factor facilitating the diffusion of the solvent sweat.

The deep-coloured crystals we think owe their rapid and painful qualities to the benzol solvent not having been completely removed, or else to the presence of liquid homologues. The smell of the darker tetryl is quite distinct, and is at once detected by the operators, who predict for themselves a bad day.

In dealing with the other effects on the skin, attention is to be drawn to the loss of hair. This is very marked, and varies with the amount of sweat present. But due consideration must be paid to the destructive effect of tetryl on the fatty substance contained in the sebaceous secretions.

From the cases detailed below we learn that tetryl produces abdominal symptoms, respiratory symptoms, hæmorrhage from mucous surfaces, headache and giddiness. Taking each of these specifically, the acidic character of tetryl accounts for some of the abdominal symptoms, a state of hyperacidity being produced, but the acute exacerbations are more difficult to explain. It is, however, possible that local aggregation may occur, and the effects are due to a cumulative dose.

The respiratory symptoms are of two types, asthmatic and asphyxial, both types being due to the irritative effects on the bronchi.

Hæmorrhage from mucous membranes, headache and giddiness: The casual factors of these symptoms are still obscure, but it is suggested that they may be due to the influence of tetryl on the blood-pressure.

A blood examination was made on operators engaged for over two months in pellet making and cleaning. The colour index was in most cases normal, only one being below 75 per cent. The red cells per c.mm. varied from 4,000,000 to 5,000,000 in the majority of cases, while there were two below 4,000,000. The lowest was 3,000,000. The majority of cases showed a degree of leucocytosis. The count varied from 4000 to 14,000, one being below 6000 and two above 9000. The rest varied between these figures. A differential count showed no decrease in the percentage of polymorphs, but at the same time showed an increase in the lymphocytes, particularly in the large variety, the average percentage of large lymphocytes being 5, the highest 12.

I. PRIMARY INFECTION: OPERATORS DEALING DIRECTLY WITH TETRYL.

Class A.—Operators dealing with Tetryl in Powder Form.

SKIN SYMPTOMS.

1. *Pellet makers.*—Female, aged 32 years. *History.*—Yellow discoloration of hands first day. Yellow discoloration of face and neck three days later. Rash appeared on neck first, then on chin and sides of nose. Patient states face itched and was sore. "It was terrible; I could not sleep with it." *Physical signs.*—Minute pin-point areas raised above surface on either side of nose and corners of mouth and neck, with erythematous condition of skin in between (granules larger at back of neck). Diffuse yellow discoloration of face and neck. Sweat faintly alkaline.

Female, aged 19 years. *History.*—Yellow discoloration of hands first day. Yellow discoloration of face on the sixth day. Rash appeared a day later, first on chin and sides of nose, then on cheeks. *Physical signs.*—Whole face swollen and congested. Eyelids of left eye swollen, and conjunctivæ red. Patient resumed work after five days. Recurrence of eye symptoms three days later in a less degree. *Other symptoms.*—Epistaxis; headache; pains in epigastrium after food.

Female, aged 27 years. *History.*—Yellow discoloration of hands third day. Yellow discoloration of face seven days later. Rash on face on the eleventh day. Patient states rash was so slight she could hardly see it. *Physical signs.*—Whole face swollen; eyelids swollen. Erythematous rash over whole face, cheeks, etc., unlike usual appearance, and copious (serous) discharge from chin and cheeks. Patient off work four days. Returned to work. Recurrence of rash week later—milder form. No recurrence since.

Female, aged 22 years. *History.*—Yellow discoloration of hands third day. Yellow discoloration of face about fourteen days later. The "very next day" rash appeared on chin, either side of nose and corners of mouth. Rash gradually spread over cheeks. "It kept me awake it was that bad." Patient complained of itching and burning of face, particularly at night. *Physical signs.*—Diffuse erythematous condition of face with minute areas raised above surface, irregu-

FIG. 1.



FIG. 2.

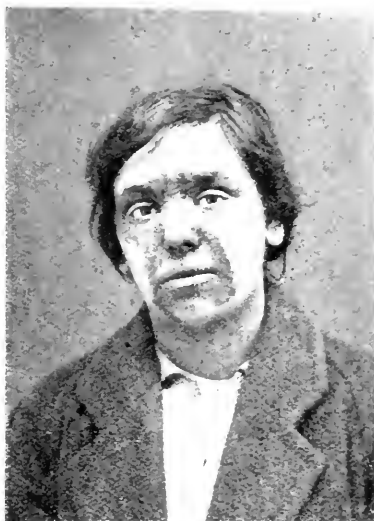


FIG. 3.



FIG. 4.



Figs. 1-3.—Class A (1) Pellet makers. FIG. 4—Class B, Gauger.

TO ILLUSTRATE DR. LUCY CRIPPS' ARTICLE ON THE PROPERTIES
OF TETRYL.

larly scattered, more numerous on chin. Copious discharge from chin. Condition cleared up, and patient went back to tetryl four days later. Recurrence of rash a month later. Distribution and condition the same; eyes swollen. *Other symptoms.*—Epistaxis marked; headache; loss of hair. "My hair falls off, indeed it does." No alteration in menstruation, no difficulty in breathing.

Female, aged 21 years. *History.*—Yellow discoloration of hands first day. Yellow discoloration of face and neck three days later. Seven days later patient states at tea-time other side of nose began to tingle and smart. Patient states she "scratched it well." Patient states she then noticed "little lumps like pimples." Whole face throbbed all the while. She could not bear anything to

touch it. Copious watery discharge from chin, which became encrusted. Eyes swelled only at night. "Face felt drawn." *Physical signs.*—Swelling and congestion of whole face and lips with minute raised areas about chin, with erythematous discharge dried on the surface here and there. *Other symptoms.*—Loss of hair. Abdominal pain, which comes and goes. Sweat alkaline and excessive. Work changed.

Female, aged 22 years. *History.*—Yellow discoloration of hands first day. Yellow discoloration of face a week later. Week later rash appeared on face and was most marked on chin. Patient states her whole face throbbed and was itchy and painful, particularly at night. *Physical signs.*—Diffuse erythematous condition of whole face with discrete (minute) areas raised above surface.

Female, aged 22 years. *History.*—Yellow discoloration of hands third day. Yellow discoloration of face four weeks later. Rash (slight) appeared round

month and nose, eyes and neck. Patient states rash tingles at night or in the warmth. *Physical signs*.—Diffuse redness of skin. Skin very dry and drawn. Recurrence of rash. (Distribution same one day after resuming work.)

Female, aged 25 years. *History*.—Yellow discoloration of hands third day. Yellow discoloration of face fifth day. Next day rash appeared round chin and nose. *Physical signs*.—Swelling of face, eyelids, lips. Diffuse erythematous rash, most marked on chin. Conjunctivæ congested.

2. *Cleaners of pellet room*.—Female, aged 38 years. *History*.—Yellow discoloration of hands first day. Three weeks later face began to jump, particularly at night. "It itches so badly I thought I was going wild." Next day rash



FIG. 5.—Class A (2). Cleaner.

appeared. "It came like little lumps in the skin. No heads on them you see. I kept my hands off as well as I could. My face and lips swelled up: I was not my own features." Two days later hands became affected. Patient noticed raised areas on flexor aspect of forearms and dorsum of right hand, and flexures of left hand. Patient states—"Me toes and knees they do jump badly too." *Physical signs*.—Erythematous condition of parts affected with raised areas larger than a pin-head, irregularly scattered. *Other symptoms*.—Giddiness, epistaxis, and three acute attacks of abdominal pain.

Female, aged 40 years. *History*.—Yellow discoloration of hands third day. Yellow discoloration of face not noticed. Fortnight later patient noticed (1) rash on either side of nose and round eyes. (2) Patient noticed little nodules and rash appeared more marked on right arm, on flexor aspect of forearms and flexures of elbows. (3) Patient states her feet (inner side and dorsum of feet,

particularly great toe) began to itch and burn, particularly at night. "I could not rest with them." She then noticed little "pimples" under skin. Patient scratched them, and they became vesicular—"matter in them." Patient continued to work, treating them herself for two days, and condition gradually spread.

DIGESTIVE SYMPTOMS.

Female, aged 38 years. *History*.—Patient was suddenly seized with pain situate in epigastrium, and radiating over whole abdomen, intermittent in character, lasting for a few minutes, and of great intensity. Patient likens them to "labour pains." *Other symptoms*.—Nausea and vomiting (rare). Duration of attack one day. Interval between attacks as from one month to six weeks. *Physical signs*.—No tenderness, no peristalsis; no alteration in pulse; no temperature.

Female, aged 28 years. *History*.—Working eight months in tetryl—six months gauging, two months pellet making. No symptoms when gauging. Six weeks after making pellets patient began to have pains in epigastrium, coming on after food, and occasionally she vomited. One night after 9.30 p.m., when she was in the pictures, she was suddenly seized with violent pain situate in the epigastrium. Pain came on in "spasms" at intervals of five minutes. It lasted for about half an hour. Patient states she began to get easy about 5 a.m. There is no history of vomiting. Patient states she had her usual food. She had some pain after each meal. *Physical signs*.—No tenderness. No rigidity. No temperature. Pulse not rapid. *Other symptoms*.—Headache. Excessive menstruation, menstrual period lasting over ten days. Patient states she is "flooded." Loss of hair. No history of rash. Patient perspires very little. When powder is "floury" it makes "my throat burn."

Female, aged 32 years. *History*.—Five weeks after beginning work patient states one night about twelve o'clock she was seized with labour-like pains in abdomen. Pain was intermittent in character, lasting five or ten minutes, and coming on at intervals of about half an hour. No history of vomiting. Since then patient has had three such attacks, coming on at intervals of about fourteen days.

Female, aged 29 years. *History*.—Yellow discoloration of hands third day. Yellow discoloration of face and neck soon after. Patient states four weeks after working in tetryl she began to have pains in the epigastrium after every meal. Patient states pain "comes and goes like stitches." Duration of attack, half an hour. Patient also complains of a feeling of weight lying across. *Other symptoms*.—Constipation; headache; epistaxis. Excessive menstruation (every three weeks instead of a month).

RESPIRATORY SYMPTOMS.

These seem to be due directly to the kind of powder, and are spasmodic in character.

Female, aged 27 years. *History*.—Patient states she has difficulty in breathing at night. Patient states she feels "stifled" and suffocated. Attacks intermittent, coming on at intervals of about one hour, and lasting ten minutes. Patient is always able to go to work next morning. Patient states floury or

damp powder gives this trouble. "It's terrible." *Physical signs*.—Rhonchi and crepitations.

Female, aged 29 years. *History*.—One week after working in tetryl, patient states she sometimes has difficulty in breathing, "just like asthma." "It comes at night just after I goes to bed, and I cough awful. Coughs strong for about five minutes, then I stops." During severe attack rhonchi and crepitations all over. Patient states attacks come on when powder is bad. Patient admitted she had had asthma when a child. *Other symptoms*.—Bleeding from ears. Epistaxis (especially early in morning). Excessive menstruation. Indigestion. No rash. Perspiration very scanty and neutral in reaction.

Female, aged 24 years. *History*.—Patient states she "cannot fetch her breath" at times. Nothing noticed when at work. Only "as soon as she comes out and at nights." Attacks last for about one hour. Comes on only when powder is bad, and after she has been filling, not after she has been on the press. Patient states she has never had anything like it before. *Physical signs*.—Rhonchi audible.

Class B.—Tetryl in Pellet Form.

SKIN SYMPTOMS.

1. *Gauging pellets*.—Female, aged 23 years. *History*.—Yellow discoloration of hands second day. Yellow discoloration of face about ten days later. Rash appeared same day. Patient states face just throbbled and itched, particularly at night. *Physical signs*.—Erythematous rash on lower half of face. Eyes swollen. Recurrence of rash three weeks later.

Female, aged 28 years. *History*.—Two days after onset of work patient got rash on chin; later over whole of lower half of face, neck, upper part of chest, under arms, on groins and feet (dorsal aspect). Patient sent home for a fortnight. Three hours after beginning work patient felt her face throbbing, and rash appeared on face and neck. *Physical signs next day*.—Whole face swollen and congested with raised areas on chin, serous discharge from skin, discharge became encrusted, conjunctivæ congested. Patient sent home. Returned to work in a week. Taken out of explosives altogether. Patient perspires excessively and sweat strongly alkaline.

Female, aged 20 years. *History*.—Yellow discoloration of hands first day. Rash on face and neck week later. *Physical signs*.—Slight erythematous rash on face and neck. Sent back to work after face painted. Condition cleared up.

Female, aged 22 years. *History*.—Yellow discoloration of hands first day. Yellow discoloration of face "appeared gradually." Face first began to tingle and itch, particularly at night. Rash appeared on chin, either side of nose, then spread. *Physical signs*.—Diffuse erythema face and neck (most marked on chin). Eyelids swollen; epistaxis.

2. *Loading guines with pellets*.—Female, aged 24 years. *History*.—Yellow discoloration of hands, face and neck first week. Twelve days later burning and tingling of face. Rash appeared next day, first in folds of neck and back of hands, then on chin and corners of mouth. *Physical signs*.—Skin of face and neck congested, with minute areas raised above the surface on chin and back of neck. Nodules at back of neck larger.

Female, aged 29 years. *History*.—Yellow discoloration of hands first day. Yellow discoloration of face three or four days later. Week later rash appeared,



FIG. 6.—Case illustrating desquamation.

TO ILLUSTRATE DR. LUCY CRIPPS' ARTICLE ON THE PROPERTIES
OF TETRYL.

starting first at corners of mouth (right side), then spreading. Neck became affected. *Physical signs*.—Erythematous discoloration of skin, with raised areas near corners of mouth. No recurrence.

Female, aged 19 years. *History*.—A week after onset of work patient noticed rash on chin. Duration of rash three days. Six weeks later recurrence of rash, first on chin, later face and neck.

Female, aged 19 years. *History*.—Fortnight after beginning work her neck began to tingle and itch. Later her whole face throbbed and rash appeared next day. *Physical signs*.—Diffuse erythematous condition of face and neck, with raised discrete areas in folds of skin and neck.

Female, aged 26 years. *History*.—Yellow discoloration of hands first day. Yellow discoloration of face and neck week later. Two weeks later rash began at corners of mouth and chin; gradually spread; neck and flexures of elbows became affected. *Physical signs*.—Face and upper eyelids swollen and red, with minute raised areas scattered here and there. Recurrence of rash from time to time only at corners of mouth and back of neck. *Other symptoms*.—Excessive menstruation seven days. No epistaxis. Fall of hair. Patient states after nine weeks she began to be affected by the "floury powder." "It gets up my nose like pepper." She began to have difficulty in breathing, coming on in spasms at night and as soon as she leaves tetryl room.

EXCESSIVE MENSTRUATION.

Generally the menstrual period is prolonged.

Patients state that instead of menstruating three to five days they menstruate for seven to ten days. In other cases patients menstruate at intervals of three weeks or a fortnight.

In one case, after three months' pellet making patient states her menstrual period lasted three weeks, and began again after an interval of one week.

GIDDINESS AND HEADACHE.

In some cases patients state the whole head aches. In other cases pain is localised to the frontal region.

EPISTAXIS.

This is complained of generally two or three days after onset of work.

LOSS OF HAIR AND DISCOLORATION.

Hair of pellet makers generally becomes discoloured, and the loss of hair varies directly with the sweating capacity of the scalp.

Female, aged 32 years. *History*.—Eight weeks after beginning work patient complained of her hair falling off in large quantities. *Physical signs*.—Yellow discoloration of scalp and marked thinning of hair.

TONSILS.

Patients frequently complain of sore throats, and on physical examination tonsils are found to be enlarged and congested.

DIGESTIVE SYMPTOMS.

The digestive symptoms are similar to those described in Class A, i.e. operators complain of pain situated in epigastrium coming on after meals.

RESPIRATORY SYMPTOMS.

In this class of operators there are no symptoms referable to respiratory symptoms.

II. SECONDARY INFECTION: TETRYL BEING CONVEYED INDIRECTLY VIA CLOTHES, PAPER.

1. *Changing-room cleaner*.—After five months' scrubbing in tetryl changing-room patient states she noticed little red spots over right hand. They itched, and "she rubbed them, and they came all the more," over both hands and arms. In this case the parts affected were back of hands, forearms (flexor aspect), flexures of both elbows, and between fingers. There was an erythematous discoloration of whole surface, with small minute nodules irregularly scattered, and a discharge, particularly from between the fingers.

2. *Laundry: Tetryl gown ironer*.—*History*.—Fortnight after beginning work, patient complained of tingling of forearm (flexor aspect). The face began to burn and itch. Patient states "she felt she could tear it to pieces." Rash appeared on chin, corners of mouth, sides of nose "skin felt rough." Recurrence of rash at intervals. Patient states she is only free a few days. *Physical signs*.—Whole face congested. Upper eyelids swollen.

Female, aged 35 years. *History*.—Working in changing-room. Inspection. After four months, patient was suddenly seized with severe pain, intermittent in character, lasting for about five to ten minutes, situated in epigastrium, and radiating over whole abdomen. Duration of whole attack, one day. No vomiting. *Physical signs*.—Abdomen quite soft. No tenderness. No temperature. No alteration in character of pulse.

In two cases we have a weekly recurrence of a superficial erythematous condition of the face.

Patients complain bitterly of the tingling and burning of their faces, particularly at night. Duration of each attack, two days.

In these cases the patients merely handle the time-sheets of the tetryl-workers one day before the recurrence of the rash.

Several tetryl pellet-makers report the yellow discoloration of their younger children, alteration in the colour of their hair, and in one or two cases rashes have been reported.

PREVENTIVE TREATMENT.

Operatives should be selected by medical examination.

Persons with histories of eczematous eruptions, pulmonary or gastric disorders should be rejected, also persons showing excessive sweating capacity.

All precautions should be taken to prevent the possibility of, or minimise the amount of, tetryl absorbed by skin, by ingestion, or by inhalation.

Skin should be kept dry with powder when at work.

All exposed surfaces, particularly that of hands, after work should be washed in hot water to which a solvent (ammonia, 20 per cent.) has been added.

Owing to action of tetryl on the fatty matter of the sebaceous secretions, the use of an emollient should be advocated when not at work.

Operatives should be advised not to sleep in garments used at work, and to have baths daily to prevent absorption after work.

Milk should be supplied to operatives before onset of work.

Alternation of work should be advised, particularly when the flouxy, ground or large, dark crystalline types of tetryl are being handled, to allow of the elimination of any trace of tetryl.

The insusceptibility which some operatives have to the rash has given rise to the question of immunity.

Natural immunity to tetryl does not exist. The period between "inoculation" and onset of symptoms varies greatly, and is controlled by the virulence of the powder and the precautions taken by the operatives.

Laboratory methods of inoculation have not been carried out, but operatives who have had rashes have been carefully observed, and not only recurrences of rashes but often other symptoms are recorded, thus disproving the popular theory of acquired immunity.

In concluding, then, tetryl is an irritant; the flouxy and large dark crystalline forms are most toxic.

Operatives handling the powder are more readily affected, and suffer more severely than those gauging pellets.

The pathogenic effects are produced by skin absorption, inhalation, and ingestion.

AN INVESTIGATION INTO THE CAUSE AND PREVENTION OF INDUSTRIAL DISEASES DUE TO TETRYL.

By WILLIAM L. RUXTON. M.B.

IN November, 1915, on account of the prevalence of industrial dermatitis among the workers in tetryl in certain works, I was asked to advise as to the prevention and cure of this complaint, which was seriously interfering with the health of the workers, and causing difficulty in employment.

Tetryl had, previous to the war, been used without special precautions and with little ill-effect, but at that time the compound was mixed with a certain percentage of gun, so that no dust rose when it was being manipulated. As now used tetryl is a yellow powder, which readily rises in the work-room as dust, and consequently charges the atmosphere, and covers with its particles both the workers and the work-room. Coincident to this change, dermatitis, etc., in the workers developed. Examined under the microscope tetryl is seen to be composed of finely divided crystals liable to fracture, the broken ends being sharp. Compared to T.N.T. and picric acid the crystals are smaller, have less tendency to agglutinate in masses, and their edges are sharper. Hence tetryl, of the three, is a greater mechanical irritant.

The comparative solubility in water expressed as per cent. by weight is as under :

Temp.	13° C.	. . . . .	100° C.
Picric acid	1.114	. . . . .	4.80
T.N.T.	0.003	. . . . .	0.063
Tetryl	0.003	. . . . .	0.069

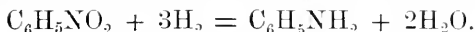
It will thus be seen that though all three produce yellow staining of the skin in different shades, picric acid crystals are large and tend to agglutinate and have rounded edges; the crystals of tetryl are smaller, have sharp edges, and tend to agglutinate only slightly; and that T.N.T. occupies a midway position between the two, except in the fact that its insolubility is the same as tetryl.

THE CAUSES OF DERMATITIS IN TETRYL WORKERS.

Presumably there are two—mechanical and chemical.

Mechanical.—The nature of the crystals suggests that they are potent mechanical irritants to the skin.

Chemical.—This point so far as I know is not settled, and requires investigation. It is probably not an oxidation similar to that of, say, chromic acid dermatitis. Tetryl is a fairly stable compound, but it is quite likely that a compound containing so many “nitro groups” (NO_2) would at an ordinary temperature react as an oxidiser if brought into contact with suitable reducing agents. This oxidising action may be dependent on the conversion of the nitro groups into an amino (NH_2), just as nitrobenzene ($\text{C}_6\text{H}_5\text{NO}_2$) is converted into aniline ($\text{C}_6\text{H}_5\text{NH}_2$), a reaction which may be represented thus:



Here the nitrobenzene, which is soluble in the cholesterol fats of the skin, acts as an oxidiser. Nitrobenzene itself is not a ready oxidising agent, but where, as in tetryl, there is an accumulation of nitro groups, will readily act as an oxidiser, and in doing so one or more of the NO_2 groups are converted into amino groups, and compounds nearly related to aniline would result. Thus from tetryl acting as an oxidiser such a derivative as $\text{C}_6\text{H}(\text{NO}_2)_3\text{NH}_2\text{NHCH}_3$, *i. e.* amino-trinitro-methyl-aniline, might be obtained. An action such as this is in no way related to the violent action which would result from the combustion, *i. e.* the oxidation, of tetryl, much less like the change which results when it explodes. It is thus possible that tetryl may act on the skin in some specific way not yet determined, and it may or may not be associated with an oxidising agent.

THE SYMPTOMS OF TETRYL POISONING.

The symptoms produced in persons working in tetryl present a fairly uniform type, *viz.* an inflammation of the skin which is exposed to tetryl dust, irritation of the nasal mucous membrane, the pharynx, and to some extent the stomach, etc. Only once have I seen constitutional symptoms, and they were transitory.

Dermatitis.—This is by far the commonest complaint. Without precautions 32 per cent. of the workers were affected with it, many of them severely. The location of the dermatitis corresponds to the skin

area not protected by clothing during work, viz. the hands and forearms, the face, neck and upper part of the chest, but in a few cases the skin was inflamed down to the iliac crests if the clothing was loose and scanty about the shoulders. Subjoined is a typical early case before any precautions were taken.

A. W., aged 39 years, worked for eleven days weighing out tetryl powder to be compressed into pellets. She has marked dermatitis of the hands and forearms, and face, which is red, swollen, eyelids oedematous, and there is a purulent discharge from a well-marked conjunctivitis; the back of her neck is similarly red and swollen, especially behind the ears, and this applies also to the front of her chest following a V-shaped area on the front where her blouse has been turned open. The acute stage lasted several weeks and was followed by extensive peeling and much itching. There are no constitutional symptoms, her whole complaint being her skin. Her appetite was increased after starting this work. There was no epistaxis.

Cases like the above were very common, but as precautions were taken the degree and severity became less and less. Thus it happened later that only an occasional very susceptible person had anything like the severity of the above case, and what in the end occurred was a little dermatitis about the chin or the back of the neck, amenable to treatment and not necessitating removal from the work in hand.

Dermatitis occurs in two varieties: (1) as a rose-red inflammation affecting the skin uniformly, and (2) as a papular rash apt to discharge sero-pus if allowed to remain untreated. As a rule both varieties are preceded by itching, sometimes intolerable.

Epistaxis.—Nearly all workers suffer from sneezing, and slight epistaxis is not uncommon.

Pharyngeal irritation is occasionally complained of, but I have no notes of any marked tonsil inflammation.

Stomach symptoms.—Vomiting of bile and stomach contents was not infrequently reported, and in a small percentage of cases was due to swallowing tetryl powder, but it was often very difficult to separate genuine cases from sickness due to other causes (*e.g.* menstruation), and the popular idea among workers that the yellowness of the vomit was due to tetryl and not bile had to be excluded.

Increase of sexual appetite was in the early stages reported as a symptom, but careful investigation failed to confirm this. Only 2 per cent. of the married women questioned confirmed this.

Constitutional symptoms.—These in my experience are very rare,

and I have seen only one case, viz. that of a foreman who had been in contact with tetryl every day for several months, and was seen before this investigation began. His skin was deeply stained yellow, there was dermatitis of the face with œdema of the eyelids, vomiting and abdominal pain, and very distinct pain in the legs following the course of the sciatic nerve and its branches, and this was regarded as a slight neuritis. He also had breathlessness, and slight, though quite evident, lividity of the lips, the exact shade masked by the yellow staining. He recovered completely in a fortnight. His blood was examined, and the only change found was slight variation in the size of the red blood-corpuscles.

Careful examination of blood-films before commencing work and after showed the following. The method employed was to examine all the workers before commencing a fortnight's shift, take two blood-films from each, and repeat the process at the end of the shift. The table (pp. 22-23) shows the result.

It will thus be seen that no characteristic changes in the blood were detected. In three cases the comparative size of the red blood corpuscles were noted as altered, but there were no nucleated cells, and this is the only noteworthy alteration. It is to be noted that all these blood films were examined when the fourteen days' shift existed, and when fairly marked cases of dermatitis and gastric irritation were occurring.

Treatment.—Tetryl dermatitis requires no different treatment to dermatitis occurring from other causes. The inflamed surfaces should be carefully washed with warm olive oil to remove discharges, and should then be coated with a lotion containing:

Calaminæ	gr. 20
Pulv. zinc ox.	gr. 15
Aq. calcis	5 ij
Aq.	5 ij
Ol. olivæ	ad 5 j

and covered with sterile butter muslin, or well smeared with ung. zinei oleat., each application being washed off with warm olive oil and cotton wool before a fresh dressing is put on.

If this is carefully done in the early stages, many cases will subside at once. The more severe cases may take several weeks to recover, and some that are neglected and become septic have required

Before working in tetryl rooms.					After working 14 days in tetryl rooms.				
Cases.	Reds.	Poly-morphs.	Hyaline.	Remarks.	Reds.	Poly-morphs.	Hyaline.	Remarks.	
1	Normal.	Normal.	Slight increase.	—	Slight variation in size.	Normal.	As before.	Slight dermatitis of face for one day.	
2	"	"	Normal.	—	Normal.	"	Normal.	Very slight dermatitis of chin.	
3	"	"	Slight increase.	—	"	"	As before.	No symptoms. Increased appetite.	
4	"	"	Normal.	Was anemic six months ago.	"	"	Normal.	Very slight dermatitis of chin.	
5	"	"	"		"	"	"	Increased appetite.	
6	"	Slight increase.	"	Eosinophiles present.	"	Increase.	"	No eosinophiles in these films.	
7	"	Normal.	"	girl.	"	Normal.	"	No dermatitis.	
8	"	"	"	Acne face.	"	"	"	No symptoms.	
9	"	"	"	Acne forehead.	"	"	"	Slight dermatitis where acne existed.	
10	"	"	"	—	"	"	"	No symptoms except sneezing and epistaxis once.	
11	"	"	"	Acne forehead.	"	"	"	No symptoms.	
12	"	"	"	Very dark complexion.	"	"	"	Dermatitis face with edema of eyelids.	
13	"	"	"	Acne chin.	"	"	"	No symptoms.	
14	"	"	"	Slight scaly eczema forehead.	"	"	"	No symptoms.	
15	"	"	"	Slight acne forehead and chest.	"	"	"	Dermatitis face and edema of eyelids after 10 days' work.	
16	"	"	"	Gets profuse vasomotor sweating of face.	"	"	"	Dermatitis face and edema of eyelids after 10 days' work.	
17	"	"	"	—	"	—	—	Absent, but no symptoms.	
	"	"	"	Clean, very dark complexion.	Slight variation in size.	Slight increase.	Normal.	Bad dermatitis face. Susceptible person.	
18	"	"	"	—	None nucleated.				
19	"	"	"	Very fair complexion.	Normal.	Normal.	"	No symptoms.	
20	"	Increase.	Increase.	Very dark complexion. Worked in fields all her life.	Normal.	No increase.	No	No second film.	
								Bad dermatitis face. Susceptible person.	

Cases.	Before working in tetryl rooms.				After working 14 days in tetryl rooms.			
	Reds.	Poly-morphs.	Hyaline.	Remarks.	Reds.	Poly-morphs.	Hyaline.	Remarks.
21	Normal.	Normal.	Normal.	Very fair complexion.	Normal.	Normal.	Normal.	Dermatitis face and neck.
22	"	"	"	Acne chin. Sweats readily.	"	"	"	No symptoms.
23	"	"	"	—	"	"	"	Very slight dermatitis chin.
24	"	"	"	Dark complexion.	"	"	"	Papular dermatitis neck.
25	"	"	"	Very dark complexion.	"	"	Increase.	Dermatitis face and oedema eyelids.
26	"	"	"	Very dark complexion.	"	Increase	Normal.	Very slight dermatitis face.
27	"	Increase.	"	Very dark complexion.	"	Normal.	"	Dermatitis face and vomiting.
28	"	Normal.	"	Dark complexion.	"	"	"	Papular dermatitis chin and cheeks.
29	"	"	"	Very dark complexion.	"	"	"	Slight dermatitis hands.
30	"	"	"	Fair complexion.	"	"	"	Dermatitis face and oedema eyelids.
31	"	"	"	Dark complexion.	"	"	"	Dermatitis face, nose bleeding and sickness.
32	"	"	"	Fair complexion.	"	"	"	Slight dermatitis face, nose bleeding. Increased appetite.
33	"	"	"	Very dark complexion.	"	"	"	No symptoms.
34	"	"	Slight increase.	Very dark complexion.	"	"	No change.	Patchy dermatitis face. Epistaxis. Increased appetite.
35	"	Normal.	"	Fair complexion.	"	"	Normal.	No symptoms.
36	"	"	"	Fair complexion. Red auburn hair. Dedicote skin.	"	"	"	Very susceptible girl, got acute dermatitis of face in a few days with marked itching, and this was still marked when blood film was taken. She also had sickness and much vomiting.
37	Foreman with constitutional symptoms mentioned above. Blood film taken after recovery.				Variation in size of red corpuscles. None nucleated.	"	"	"

months to recover. These, however, are the exception, and have been due to neglect on the patient's part.

PREVENTION OF DERMATITIS, ETC., IN TETRYL WORKERS.

In the framing and instituting of means to prevent tetryl dermatitis several principles have to be considered :

- (1) Dermatitis is the chief disease among tetryl workers.
- (2) Dermatitis occurs on that part of the body exposed to tetryl dust of the workrooms.
- (3) The amount of dust is in direct ratio to the occurrence of skin inflammation.
- (4) The resistance of the skin is in direct ratio to the length of exposure to the irritating dust.
- (5) No means has yet been discovered to neutralise the irritating effect of tetryl on the skin and mucous membranes of the respiratory and digestive tract.
- (6) Tetryl is practically insoluble in water, but more soluble on greasy skins.

It therefore follows that the means of prevention are to be found, in the present state of our knowledge, in the protection of the skin from irritating dust and the purifying of the air of the workrooms, so that as little dust as possible is inspired or swallowed. On these principles means were gradually evolved, and the finished product is as follows :

The workrooms.—These should be lofty and well ventilated, but not draughty. There should be no ledges on which dust can settle ; thus the walls should be smooth, and if made of wood they should be well varnished. The window-frames on the inner side should be nearly as possible flush with the glass, and any overhead beams should be latted on the top with a triangle apex upwards. As few partitions as possible should exist on the work tables—it is a mistake to provide a partitioned space for each worker. The tables should be smooth, and, indeed, the whole construction of the room so arranged that as little dust as possible accumulates, and if and where it accumulates it can be easily removed.

Perhaps the most important factor in the prevention of dust in the workrooms is the efficient working of exhaust fans. The method employed at — is as follows :

A table is arranged round the wall. The top of the table at distances suitable for each worker at the table has a perforated grating or wire grid, each leading down to a suction duct, which communicates with a common duct that passes through the outside wall of the room under the table, where a suction fan is fixed. Interposed between the end of the common duct and the suction fan a chamber or filter of wet coke should be interposed to prevent the tetryl dust getting into the bearings and possibly exploding. This arrangement catches the dust, and coke should be changed from time to time. This arrangement of bench occupied the end and part of the sides of the room. It is advisable that one fan should not be relied on to produce an in-suction draught to too many gratings, as those farthest from the fan are apt to have feeble in-suction power.

At the farther end of the room there is an ordinary table, at which workers ganging the pellets sit.

Clothing.—Each worker wears a long khaki jacket or overall, made non-inflammable, and the sleeves so arranged that they button round the wrist, and the neck should be high and fit closely. It is possible that a material with a more glossy surface than khaki would be an improvement.

Each worker should wear soft wash-leather gloves, which fit well and reach up to the elbows. These should be well cared for, discarded when they get hard, and should never have holes in them.

Veils.—These have always been a trouble, because the women disliked wearing them, and a mesh small enough to prevent the passage of dust obstructed clear vision. They were ultimately discarded, as it was found that perfect powdering of the face and neck was more agreeable and equally efficient. If veils are worn they should be supported on a light framework or light broad-brimmed hat, so as to remove them well from the face, and they should be ample and long enough to come below the shoulders, both before and behind.

Face powder.—Nothing is better than two parts of zinc oxide to one of starch. It should be stored in an ante-room, or in a cupboard used only for this purpose in the workroom, so as to be certain no tetryl dust gets into it. It should be applied very thickly to the face and neck. Powders are to be preferred to oily preparations.

Washing arrangements.—These should be ample, and the best consists of a long porcelain trough with a constant inflow of hot and cold water at one end, and a waste pipe at the other, slightly above the level of the bottom of the trough.

Cloak-room.—A separate cloak-room should be provided for the storing of tetryl gowns, or a special department in the general cloak-room, in which no one but tetryl workers are allowed.

Length of shift.—In the earlier stages each person worked for fourteen days in the tetryl rooms. It was soon discovered that more trouble occurred in the second week. The shift was therefore limited to seven days, and this was found to be a great improvement. The limitation of output was soon got over because in a few weeks the old trained workers returned.

Routine of daily work.—When the women arrive in the morning they should be given a glass of milk or cocoa. They then proceed to the cloak-room to get their gowns and gloves. Arrived at the work-room they powder their faces and necks thickly with the face-powder, returning it to the special cupboard provided for the purpose. Those thus properly clothed and powdered proceed to the gauging table and no other directions are needed. Those who are to work with loose tetryl take their places at the table beside the in-suction wire grids, place the mull containing the loose tetryl on the grid, and also the small weighing scales. It thus follows that as they lift the tetryl on to the weighing scales the fine dust is sucked into the grid and does not disseminate in the air.

When a meal interval arrives each individual takes off her gloves, hangs them on a clothes line outside, proceeds to the washing room and washes her hands, face and neck. Resuming work she repowders herself, puts on her gloves, over which she buttons her tunic at the wrist, and proceeds as before, the routine being repeated at each meal interval.

Stringent directions are given that no loose tetryl is allowed to remain on tables or floor, and if any is found damp cloths are provided to remove it. The workrooms should be frequently washed out.

Considerable supervision is required, as many workers are extremely careless, and regard regulations as tasks, rather than for their benefit.

The gowns should be washed at least once a week, and gloves more frequently. If veils are used they also should be washed frequently, and, like gloves, hung in the open air. To avoid gastro-intestinal irritation every worker was given a dose of magnesia or mist. alb. every other day.

One or two practical points remain :

(1) Weekly inspection of workers before going to work, with the object of trying to discover who were susceptible and who were not, was found practically useless. The complexion, dark or fair, the presence of acne was for weeks noted, but no working rule could be discovered. (*Vide* remarks in blood-examination table ; many more than these were tabulated.)

(2) A very small percentage of people are very susceptible, and these resist all precautions. They should be permanently sent to other work.

The following is a typical case on December 6th, 1915 :

A man worked in tetryl room for one day, the next he had intense itching of the face followed by acute dermatitis, with œdema of the eyelids. In ten days he had apparently recovered, went back to work, and at once relapsed. In about the same time he had again apparently recovered. He put on one evening the suit of clothes he wore in the tetryl room when he at once relapsed.

(3) If a dermatitis is treated early, it is usually checked and work can continue.

(4) After workers have completed their shift they should be told that if there is the slightest sign of skin irritation, they should report it at once. During the course of the investigation a considerable number of cases left the workrooms quite free, and weeks afterwards sent in a claim for compensation, and it was discovered that the dermatitis, at first slight, by neglect became septic and very marked.

(5) It is of some importance to exclude all non-tetryl workers from their cloak-room. Two of the worst cases of dermatitis seen were due to women, not working with tetryl, covering their heads with tetryl gowns in the cloak-room during a thunderstorm, and another was the washerwoman in the cloak-room.

(6) If an apparently recovered case of dermatitis is put to work in a very warm room, such as a lacquering room, the dermatitis is apt to relapse.

In the gradual evolution of precautions it was interesting to note :

(1) The wearing of long wash-leather gloves practically at once abolished dermatitis of the hands and forearms. For months before tetryl ceased to be worked at — no case was reported on the hands or forearms.

(2) The efficient ventilation and construction of the new rooms had a distinctly beneficial effect.

(3) When the fans became efficient the atmosphere was strikingly less dust-laden, and soon diminished the number of cases. There were two rooms, N and W ; in N the fan was efficient ; in W there was delay and difficulty in procuring a fan, during which time more cases occurred in W than N.

(4) Thicker powdering was an efficient substitute for veils.

(5) The immediate removal of all loose powder in the room was helpful.

Results.—Available statistics when the investigation began, in December, 1915, and before any precautions were taken, show 34 per cent. of workers affected in one way or another.

When in February, 1916, new premises, gloves, face powder, veils, but no fans or seven-day shifts, had been instituted, my notes indicate the absence of dermatitis of the hands and arms, and though several cases of dermatitis of the face were reported at each fortnightly inspection the severity was less marked.

There were two workrooms, N and W.

In room N all precautions were taken and the fan arrangement was efficient.

In room W all precautions were taken, but the fan arrangement was not efficient.

Weekly shifts were commenced on April 5th, 1916, and from this period to November 21st, 1916, when work on tetryl was stopped :

6 cases had to leave before their 7 days were com- pleted because of face dermatitis (chiefly)	} in room N.
18 cases had to leave before 7 days were completed because of face dermatitis (chiefly)	
	} in room W.

As a rule twenty-four women were employed each week in each room—day and night shift—giving a grand total of approximately 1430. Of slight cases treated at once by the resident nurse at the

ambulance station and checked, there were, in addition to the above :

30 in room N.

39 in room W.

It is noteworthy that the number of these was diminishing month by month as the smaller details were being more carefully carried out.

The compensation figures require some explanation.

In July, 1916, my attention was directed to the size of the compensation account. It was a revelation to me, as the number of cases was steadily diminishing in the tetryl rooms with the precautions observed. I ordered that everyone on compensation should be presented to me weekly for examination. The result proved a revelation of how compensation can be claimed and paid on grounds apparently real, but on fallacious expert examination.

I found many of the cases in the women workers genuine enough in origin, but prolonged from sheer neglect on the part of the individual. Efficient treatment cured these cases, and they disappeared from the compensation list. One case in particular is noteworthy. A young woman had in April genuine tetryl dermatitis; she continued on the compensation list for a long time with a skin eruption. Investigation proved this rash to be due to syphilis; needless to say, she was soon off the list and out of the works for treatment.

It was such cases as these that swelled the list, which by October and November was reduced very greatly, and had approached near the vanishing point, so far as tetryl was concerned, when work ceased on November 21st, 1916.

CLINICAL NOTES.

A CASE OF NODOSE BROMIDE ERUPTION IN A
BREAST-FED INFANT.

By E. H. MOLESWORTH, M.D., Sydney, N.S.W.

(Communicated with comments by A. WHITFIELD, M.D.)

THE subject of this note was brought for consultation on May 16th, 1916, with the following history :

The baby was 10 months old at the time of the visit, and had up to that time been entirely breast-fed and had taken no drugs. Three and a half weeks before the consultation the eruption had begun in the form of small, bright red lumps on the forearms, hands, and face. Similar lesions had appeared soon after on the trunk, but these were more sparsely distributed.

The earlier lesions became crusted and granulomatous in appearance in eight to ten days from their beginning, and these characteristics were daily becoming more pronounced. The mother described the formation of actual pustules at the summits of the nodes, but at the time of consultation only crusting was evident.

When first seen there were multiple nodes of various sizes, the distribution of which is best demonstrated by the photographs. The lesions rose abruptly from the surface of the skin, and except at their summit were not of a very marked redness, though the mother said that at their first appearance they were of a vivid red. To palpation they were firm and elastic, and when pressed exuded small droplets of pus from multiple small openings. They did not appear to be to any extent painful or tender to the touch, though the child was fretful and restless. The pulse and temperature were both normal and the general health was good.

The bromide apparently was contained in the mother's milk, as the child had taken no powders of medicine of any kind, whereas the mother had for three or four months been taking nearly every night a sleeping draught consisting of 30 grains of potassium bromide.

It was reported that the lesions gradually died away about six weeks after the mother had given up taking the drug.—E. H. M.

This case appears to me to have two or three points of interest. In the first place, cases of bromide eruption due to ingestion in the



TO ILLUSTRATE DR. MOLESWORTH'S CLINICAL NOTE ON A CASE OF NODOSE BROMIDE
ERUPTION IN A BREAST-FED INFANT

maternal milk are certainly extremely rare. I do not know how many cases have been reported, as I have not had time to search the literature for them; but I know of two certain cases, one, which I believe to be the original observation, by the late Colcott Fox some years ago, and a second whose photograph is published by Mr. Jonathan Hutchinson in the last edition of Clifford Allbutt's *System of Medicine*. This source of bromide is so striking that in spite of its comparative rarity it has caught the attention of the medical profession, and is consequently well known. A second point of interest is that the temperature is reported as normal. I must confess that before this I was uncertain whether the temperature was raised in bromide eruptions or not; but I have lately learned that it may be raised with every outbreak of eruption due to potassium iodide. I was asked to diagnose a rash in a patient in hospital under the care of a colleague, and made the diagnosis of iodide eruption due to the iodide he was taking for aneurism. The house-physician asked me whether I thought a rise of temperature accompanying the outbreak was due to the drug, and I was forced to confess complete ignorance on the subject. With the patient's consent we stopped and resumed the iodide on more than one occasion, and each outbreak was accompanied by a sharp rise of temperature, 102°-103° F.

In this case the lesions were small bullæ and there was no question of a suppurative fever, and as a matter of fact the pus from unruptured lesions of bromide and iodide has always shown itself sterile in my hands.

The third point of interest is the duration of the eruption in the child after the mother left off the drug. Six weeks is a rather long time for the lesions to take to disappear unless they are very severe. We have, however, to remember that bromide is rather slow to be excreted, and we may allow that it took some time, possibly even three weeks, for it to disappear entirely from the mother's milk, and that the baby may have been ingesting appreciable amounts of bromide after the mother had left off taking it. Children are very sensitive to bromide, and I have seen a well-marked rash develop in hospital after two 10 grain doses given to keep a fractious baby quiet, and have also reported a case in which the eruption developed on the third day of life in a baby whose mother had taken 30 grains a day during the latter months of her pregnancy, and had not secreted milk when the eruption first appeared on the child.

A. W.

A CASE OF *TINEA TONSURANS* (*MICROSPORON*) IN
AN ADULT.

(From the Skin Department, London Hospital.)

By W. JENKINS OLIVER. B.M.

Mrs. C—, aged 33 years, first attended the Skin Out-patient Department of the London Hospital on May 2nd, 1916, with her two children, all affected with *Tinea tonsurans*. Her own condition had been first noticed two weeks previously, and she complained of her patch being rather sore and itching. On examination there was on the right occipito-parietal region a round reddish area of short hairs of about the size of a shilling piece. This was slightly scaly, with several broken hairs, which on microscopical examination showed an obvious *microsporon* sheath. The younger of the two children had been affected for two months, and the other for some six weeks. The latter showed gyrate figured scaly lesions on the scalp with broken hairs, and similar scaly lesions on the nose, forehead, wrists, and back. The patient had been using the same comb as the children, who had also been putting on their mother's hair-frame. An ointment was prescribed for the patient and X-rays for the two children.

Cultures were made from hairs removed from the patient and from the elder of the two children on to 4 per cent. glucose and maltose agar proof medium on May 13th, 1916. The cultures obtained from these two cases resembled each other so closely in all stages of growth that one description only is necessary, taken from the notes made at varying intervals.

May 22nd.—Round dome-shaped central raised tuft with long radiating straight hyphæ.

May 31st.—All cultures show a definite woolly surface with a thicker raised central portion, which in some tubes resembles a knob or disc.

June 3rd.—General white woolly appearance of all cultures suggesting pleomorphism.

June 26th.—Thick white woolly covering suggesting pleomorphism.

October 6th.—(Subculture made on July 1st.) All tubes show

dense woolly growths, which are raised about the centre and, especially on glucose, have a slightly yellow tint.

These cultures in all appearances were similar to those described as obtained from a case of microsporon *Tinea tonsurans* in an adult, and reported by myself in 1915,* and shown by Dr. Sequeira and myself at a meeting of the Dermatological Section. The general opinion of the members then present was in accordance with our own, that the cultures were those of *M. felinum*. A further examination of the cultures from the patient then reported revealed in a water-drop preparation none of the spindle-shaped bodies described by Sabouraud as being absolutely characteristic of a culture of a microsporon of an animal nature, but showed a mycelium corresponding to that figured of *M. audouinii*. An absolutely similar appearance was presented in a water-drop preparation from the cultures of the present case and from that of her one child. All the cultures here mentioned showed little or nothing of the concentric ringed appearance, and were somewhat more luxuriant, with a whiter, more rapidly spreading surface growth than the majority of the other cultures which I had previously obtained and distinguished as those of *M. audouinii*; but in the absence of the "fuseaux multiloculaires" appearing in mass form, which are considered to be essential in an animal type of microsporon, I can only conclude that both this case and the patient previously reported were affected with a fungus of a human type, possibly that described by Sabouraud in 1907 as *M. reverterum*.

With regard to the pleomorphic appearance of the cultures as they became older I made fresh subcultures on October 6th, 1916, on to glucose agar from the subcultures made on July 1st. These grew with appearances similar to those of the original cultures, with the exception that they were more grey and less white in colour. The absence then, of any definite true pleomorphic change supports the view of a human rather than an animal source of infection.

Dr. Adamson has kindly examined the cultures of this second adult case, and is of the opinion that they are those of the ordinary human (*M. audouinii*) type.

To Dr. Sequeira I am indebted for his permission to publish the notes of this case from his Out-patient Department.

* *Brit. Journ. Derm.*, xvii, p. 119.

A CASE OF LEUCOCYTHÆMIA CUTIS.*

By H. BATTY SHAW, M.D. AND D. LOUGHLIN.

J. B—, farm labourer, aged 37 years, was admitted into University College Hospital under the care of Dr. Batty Shaw. His history was as follows: After being in the Army for fifteen years, having served in India, Burma, and Aden, he had returned to England and become a farm labourer. He had had pneumonia and frequent attacks of malaria. Although his wife had had two miscarriages he gave no history of syphilitic infection.

The first abnormality in his condition was the development of pains in his joints and in his back, which began eight months ago. This was followed in a few days by the development of purple-coloured patches on his body. About five months ago ulceration developed over the sacrum, and four months ago small lumps developed in the skin of his body, limbs, and face. These lumps progressively increased in number and size.

He was originally admitted into the West Kent General Hospital, Maidstone, under the care of Dr. W. Shaw, who suspected some change in the blood, and discovered an abnormality.

When the patient was admitted into University College Hospital on August 22nd of this year he was found to be febrile, the temperature reaching 101° F. to 102° F.; the pulse-rate was increased, and the patient was obviously very ill. The striking point about his features was that they were leonine, and the first impression was that he was suffering from leprosy. Scattered about his face were soft, fleshy tumours, involving the skin of the forehead and face; they were present also on the neck, the front of the body, the arms and forearms, and the fronts of the thighs and legs; in some parts of the body they were absent—*e. g.* the ears and the eyelids, the elbows, knees, hands, and feet. Some of them were purple in colour, others red or pale pink. They were painless, not deeply attached, and movable; they were soft and free from ulceration. There was a shallow ulcer of the skin over the sacrum, and also a small ulcer on the glans penis. The skin of the ears and eyelids and mucous

* Shown at a meeting of the Dermatological Section of the Royal Society of Medicine on October 19th, 1916.



TO ILLUSTRATE DRS. BATTY SHAW AND LOUGHLIN'S CASE OF LEUCOCYTHÆMIA CUTIS.

membrane was distinctly pale, but the skin of the body generally showed a brownish pigmentation, and the legs especially showed patches of purpura. The nodules were described as having been much flatter than they were on admission. There were subconjunctival hæmorrhages in both eyes; only a few deposits were found on the back; the feet were œdematous; the skin was rather hyperæsthetic, but there was no pruritus. The voice was distinctly hoarse. On looking into the month it was seen to be pale, but the tonsils were enlarged and showed purplish patches of discoloration. The only glands felt enlarged were those of the groin; their enlargement appeared to be due to the ulceration above-mentioned. Neither spleen nor liver could be felt. The patient's memory was found to be impaired, but no physical signs of disease of the nervous system could be made out.

Mr. J. Herbert Parsons reported the presence of small hæmorrhages in the neighbourhood of the maculæ, and some very minute ones in the periphery of the fundi; the disks were pale, but otherwise normal. The penile ulceration and the ulceration of the buttocks appeared to be non-syphilitic in nature. The Wassermann reaction was also negative. During his stay in the hospital the patches increased in size, especially on the face, so that there was very little uninvaded skin visible. Even the eyelids became invaded, and there were deposits beneath the conjunctiva. The temperature persisted, with some trace of periodicity. Under treatment the purpura in the legs disappeared, and the patches on the face lost their purple colour. Later, however, this recurred.

Examination of throat and larynx by Mr. Herbert Tilley, October 18th.—"The palate is abnormally pale. The upper end of right tonsil is swollen and of a reddish colour, but there is no definite or circumscribed tumour. In the region of the left lingual tonsil is a reddish-purple swelling the size of a hazel-nut, the base is broader than the free portion, so that it resembles the tumours seen elsewhere.

Larynx.—"The vocal cords are normal in movement and appearance, but the right is largely hidden by a reddish-purple swelling which occupies the anterior half of the right ventricular band; the swelling is again about the size of a hazel-nut."

Blood-count.—This was carried out on five occasions. The total

red cells increased since admission from 830,000 to 1,800,000 per cubic millimetre. The hæmoglobin also increased from 15 per cent. to 35 per cent.; the colour index varied from 0·65 to 0·98. The red cells showed vacuolation and poikilocytosis. Macrocytes were numerous on two occasions, absent on three occasions. Microcytes were always present. On two occasions only were nucleated red cells seen. The white cells varied from a minimum of 3500 to a maximum of 6200. The analysis of the five counts is as follows :

Date.	Total number of white cells per cubic millimetre.	Percentage of lymphocytes.		Percentage of polymorpho- nuclear cells.
		Small.	Large.	
August 25, 1916.	6,000	73	2	25
September 1, 1916	3,000	60	10	30
September 12, 1916	3,500	50	6	44
September 30, 1916	3,400	60	8	32
October 4, 1916	6,200	38	6	56
Average	4,420	56·2	6·4	37·4

Mr. T. W. P. Lawrence was good enough to examine a microscopical section of one of the nodules removed under local anæsthetic, and has reported as follows :

Stratum reticulare.—"The superficial zone is densely infiltrated with cells, in the main resembling lymphocytes. Many of the cells are, however, rather larger than normal lymphocytes; the nuclei are less uniform in size, and many are slightly oval. A specially wide and dense tract of infiltration follows the course of a hair-follicle, and elsewhere similar infiltration is present, though much smaller in amount. In certain areas the lymphatic clefts of the stratum reticulare are markedly dilated, and the intervening connective tissue is increased in amount and density. In other areas the endothelium of the clefts is hyperplastic; in places the cells are swollen, highly protoplasmic, cubical and arranged around a central lumen, in other places they are flattened, fusiform, polyhedral and arranged in narrow, solid columns or masses. Scattered through the reticulare are small areas of red cells.

Stratum papillare.—"The papillæ are swollen from œdema. The cell infiltrate of the reticulare encroaches very slightly on this layer, except in certain of the papillæ, where a central column of cells extends almost to the epithelium. A few red-blood corpuscles have been extravasated in places.

Epithelium.—"This forms a very thin superficial stratum, and the inter-papillary processes are short and narrow.

Diagnosis.—"Leucocytic infiltration of lymphocytic type with chronic reticular lymphangitis."

Note on November 2nd, 1916.—At 1 p.m. the patient suddenly had a fit, which was convulsive in character, and then he was comatose for about three hours before death, which occurred at about 4.45 p.m.

Post-mortem report.—"Body wasted; most parts show firm deposits in the skin, some of which are hæmorrhagic, and the whole body shows brown pigmentation; feet œdematous. Brain: Excess of cerebro-spinal fluid; soft membranes œdematous; brain pale. Heart: Small, fat on surface, atrophic and œdematous; a fibrous patch on the anterior surface of the right ventricle; heart muscle rather brown in colour; considerable hydropericardium; aorta normal. Larynx and trachea: One or two small nodules present in each aryteno-epiglottidean fold; large deposit occupying the whole border of false vocal cord, which is ulcerated and sloughing at its posterior end. A large deposit in the hinder wall of the larynx and a small deposit in the upper part of the trachea (which is congested throughout). Tongue: There are several large deposits on the back of the tongue; tonsils not enlarged. Glands: One or two small glands in the lower part of the neck and mediastinum show trifling enlargement and are rather hard; mesenteric and other glands normal. Stomach, intestines, and pancreas normal. Spleen: Universally adherent; enlarged; tougher than normal; weight, 13½ oz. Liver appears normal. Peritoneum: Considerable ascites. Kidneys: One of the kidneys has several areas in which multiple abscesses are present, appearing as yellow spots of fluid on the surface and streaks in the cortex; otherwise kidneys show little that is abnormal, beyond great œdema of fat of the hilum. Suprarenals: Most of the yellow fat has disappeared. Bone-marrow (from centre of femur) appears rather gelatinous, but is yellow (the gelatinous appearance probably due to atrophy of the fat); in places the marrow is redder than normal."

Comment.—"The clinical features of this case are extraordinary enough, but greater interest centres round the problem of diagnosis. The diagnosis of Leucocythæmia cutis is made on the blood picture, which shows severe secondary anæmia without the classical signs of

pernicious anæmia, and a qualitative change in the leucocyte picture. So far as the number of leucocytes is concerned, there is little to support the contention that the case is leucocythæmia. It may be thought that an average total lymphocyte count of 62·6 per cent. is met with in lymphadenoma, and some writers have insisted upon this possibility, but most are agreed that high lymphocytosis of this degree indicates the leucocythæmic nature of the malady. Mr. Lawrence's report on the microscopic appearance of the nodules shows cells like lymphocytes accumulated in the skin. To get over the difficulty of speaking of a case of leucocythæmia or leukæmia with only qualitative and not quantitative changes in the blood the term "aleukæmia" has been introduced, but for simplicity's sake this case has been shown under the title of "Leucocythæmia entis." The extraordinary development in the skin in this case is not unfamiliar to dermatologists. A case very similar to the present one, including the anomalous blood-count, has been described by Pfeiffer* under the name of pseudo-leukæmia, but Pinkus,† in describing the conditions met with in the skin in leucocythæmia, rightly regards Pfeiffer's case as one really of Leucocythæmia entis, relying, as he did, upon the fact that though the total leucocyte count was not increased, the relative proportion of lymphocytes was.

A CASE OF LYMPHADENOMA WITH CUTANEOUS LESIONS.‡

By DUDLEY CORBETT, M.D.

THE case was shown by Dr. Knowsley Sibley in July and November, 1914, and a full account of it was published by him in the *British Journal of Dermatology*, February, 1915. The diagnosis, based upon the findings of the Pathological Committee, was in favour of the case being one of lymphadenoma with glandular and cutaneous lesions.

* Pfeiffer, Th., "Ein Fall von Pseudolenkämie mit spezifischen Erkrankung der Haut." *Wien. klin. Wochenschr.*, 1897, x, p. 548.

† Pinkus, F., "Ueber die Hautveränderungen bei lymphatischer Leukämie und bei Pseudolenkämie;" I Th.: "Ueber lymphadenoide Hauttumoren." *Archiv. f. Derm. u. Syph.*, 1899, I, pp. 50, 53.

‡ Shown at a meeting of the Dermatological Section of the Royal Society of Medicine on November 16th, 1916.



TO ILLUSTRATE DR. DUDLEY CORBETT'S CLINICAL NOTE ON A CASE OF
LYMPHADENOMA WITH CUTANEOUS LESIONS.



The patient was admitted to St. Thomas's Hospital on November 20th, 1916, under the care of Dr. H. G. Turney. On admission the lad, who was now aged 18 years, was in a fair state of general health. The papular eruption had, however, spread considerably, particularly over the lower part of the abdomen and inguinal regions. A number of the larger papules appeared to have undergone a process of caseation in the centre, and he stated that he was able to express a putty-like material from them. The inguinal glands were considerably enlarged, but those in the cervical region, while palpable, were not enlarged to anything like the same extent as shown in the photographs in Dr. Sibley's article. A band of white scar tissue extended from the mid-line above the umbilicus round the left side to the mid-line of the back indicating the site of the herpetic eruption which was previously described. The liver margin could be felt $\frac{1}{2}$ in. below the costal margin. The lower pole of the spleen projected about 1 in. below the costal margin during deep inspiration, and was well defined and of firm consistency. Some glands could be felt deep down in the left iliac fossa. There was some relative dullness over the manubrium sterni and dullness at the base of the right lung where vocal resonance was diminished and the breath sounds were faint. The testicles were undescended and could be felt atrophied in the inguinal canals. Excepting in the scalp there was a complete absence of body or facial hair. These two points were not previously described. The urine contained neither albumin nor sugar. The blood count was very similar in type to that of December 31st, 1914: erythrocytes, 5,000,000 per cubic millimetre; hæmoglobin, 80 per cent.; colour index, 0·8; leucocytes, 30,640 per cubic millimetre; (polymorphonuclears, 19 per cent.; small lymphocytes, 35·75 per cent.; large lymphocytes, 8·5 per cent.; large hyalines, 2·5 per cent.; eosinophiles, 34 per cent.; basophiles, 0·25 per cent.). The total leucocytes had remained nearly the same, but there was a considerable diminution in the number of polymorphonuclears, 19 per cent., as compared with 35·2 per cent. on the previous occasion, together with an increase in the total lymphocytes, 44·25 per cent., as compared with 20·4 per cent.

During his stay in the hospital he had a short attack of bullous dermatitis on the palms and soles; its general characters resembled dysidrosis, and it was accompanied by intense irritation. The tem-

perature has varied throughout between normal and 100° F.; once or twice it touched 101° F.

Two biopsies were made. At the first, one of the unbroken caseating papules was excised, and at the second, one of the small nodules without any appearance of caseation. Mr. Shattock has kindly examined the sections made. Those from the caseating papule showed a minute cyst lined with epithelium and containing *débris* which might be that of aborted hairs or epithelial cells. Surrounding it was a thin layer of the same kind of chronic inflammatory tissue as was seen in the sections of the small nodule. These showed no traces of a cyst. Mr. Shattock was of the opinion that the cellular structure of this tissue would support the hypothesis that the case was one of lymphadenoma with miliary growths in the skin.

ROYAL SOCIETY OF MEDICINE.

DERMATOLOGICAL SECTION.

MEETING held November 16th, 1916, Dr. J. H. STOWERS, President of the Section, in the Chair.

Dr. H. G. ADAMSON showed a case of *fixed erythema of the palms*. The patient was a man of middle age. For five years there had been a sharply circumscribed, rounded patch of erythema upon the ulnar side of the left palm. The patch was not raised and showed no other change beyond redness. It had persisted unaltered except for a slight increase in size. During the past two years a similar patch had appeared upon an exactly corresponding area on the right palm, and was also persistent without any variation in the degree of redness. The patient complained of no local sensations, and there was no anesthesia nor hyperæsthesia. He suffered from "neuralgic" pains along the forearm and behind the ulnar side of the elbow, but there was no tenderness of the ulnar nerve. He had not seen a similar case, and hoped that some member might be able to throw light upon its nature.

Dr. F. PARKES WEBER said the red patches on the hands reminded him somewhat of the sharply localised patches of erythema which occurred on the sides

of the face in some persons. But these patches on the sides of the face to which he referred were mostly associated with local sweating, and generally they were brought out by eating.*

Dr. ALFRED EDDOWES said the patch reminded him of a case he had seen on the face, unconnected with sweating. The patch, as large as a shilling, lay over the point of exit of the mental nerve, and remained there for many months. He suggested at the time that it was due to the eruption of a wisdom tooth in the lower jaw on that side. Eventually it got well. It seemed to be closely allied to the "flush patch" of Hutchinson.

Major GRAY thought the history of the neuralgic pain was of more importance than the skin lesion. He suggested that it might be due to a cervical rib: that condition might cause such symptoms. The sensory phenomena should be gone into carefully.

Dr. GEORGE F. STEBBING showed a case *for diagnosis*. The patient, aged 33 years, first came under observation on May 14th, 1916, when she had an abortion. She stated that in November, 1915, she had a red rash all over the body. This did not cause any irritation and cleared up after she had been treated for a month as an out-patient at a hospital. The present eruption first appeared in June, starting on the inner sides of the thighs as red, raised papules which caused great irritation. Since then the lesions had appeared all over the body, the face and the scalp being the only parts free. When the papules faded they left pigmented patches, light brown in colour, being especially noticeable on the inner sides of the thighs. The lesions varied in size from that of a pin's head to $\frac{1}{4}$ in. in diameter. Treatment did not appear to have had any influence on the condition.

The PRESIDENT regarded the lesions as characteristic of Lichen planus. The larger plaques resulted from the aggregation of smaller papules, and as they underwent secondary change they were apt to mislead.

Dr. J. J. PRINGLE thought this case illustrated the extreme difficulty of making a diagnosis of even perfectly familiar lesions in artificial light. This was a typical case of Lichen planus; and if they were to see it by daylight there would be no hesitation about their pronouncement.

Dr. J. L. BUNCH showed a case of *von Recklinghausen's disease*. The patient was a woman, aged 35 years, who first developed some small tumours on her back. They began to appear ten years ago, and since that date they had become larger in size. She had

* *Vide* F. Parkes Weber, "Localised Flushing and Sweating of the Cheek on Eating," *Trans. Clin. Soc. Lond.*, 1905, xxxviii, p. 216.

developed an immense number of them all over her body and on her face. Some were pigmented, of a brown colour, and some purplish. She ascribed the onset of her condition, in his opinion without any reason, to some injections she had had, ostensibly for the cure of the eye which she had now lost. The man—he did not know whether he was a registered practitioner or not—had said he could restore the sight of the eye, which was failing on account of cataract, by injecting a substance into the bottom of her spine and her head. After these injections she appeared to have developed a rash, which persisted, and these tumours had since developed. They were tender to the touch, but they caused her very little trouble. A section from one of the tumours, which he showed under the microscope, presented chiefly spindle-shaped cells. The tumours varied in size from that of a small nut to that of a pea. There were no tumours on any of the mucous membranes, such as had been observed in some other cases of the disease. He was a little doubtful about her mental condition, but her general health was quite good.

Dr. F. PARKES WEBER supposed that, strictly speaking, von Recklinghausen's disease ought to show evidence of Plexiform neuroma as well as the presence of the two other classes of lesions—namely, Molluscous fibromata and patches of cutaneous pigmentation. He thought that Dr. Bunch's case should be designated an incomplete case of von Recklinghausen's disease, but such incomplete forms were probably commoner than the complete *classical* examples of the disease. In some incomplete forms of von Recklinghausen's disease the patches and spots of cutaneous pigmentation occurred without the molluscous tumours and without Plexiform neuromata, though Molluscous fibromata might develop later on.

Dr. S. E. DORE asked what Dr. Parkes Weber implied by the term "Plexiform neuroma." Were not all these small tumours in reality Plexiform neuromata. He thought it had been shown that they were derived from the nerve sheaths.

Dr. F. PARKES WEBER (in answer to Dr. Dore) said that none of the tumours felt to him as if they were attached to nerve trunks, nor did they convey the feeling of a bag of hard worms which one sometimes got in the case of Plexiform neuromata. Moreover, Plexiform neuromata were usually larger than the tumours in the present patient.

Dr. J. M. H. MACLEOD showed a case of *oedematous sclerodermia*. The patient was a woman, aged 46 years, who was suffering from sclerodermia affecting the face, extremities, and the greater part of the trunk. She was fairly well nourished and had enjoyed excellent health until the disease appeared about twelve months ago. She had

been married twelve years and had had no children. Soon after marriage she had some uterine trouble from which she soon recovered, and with that exception there had been nothing of medical interest in her past history.

About a year ago her menstrual periods became irregular and gradually ceased, and following their cessation her face, arms, and legs became swollen, and later her feet and hands became involved. For some time previous to this she had symptoms of a feeble circulation in her hands, which were suggestive of mild Raynaud's disease. Gradually the swelling disappeared, being replaced by a progressive sclerodermia which had now become universal except in the scalp and a small zone about the umbilicus. The hands were stiff and there was definite sclerodactyly which interfered with all fine movements. The region about the lips was hard and immobile so that she had difficulty in opening her mouth.

Within the last few weeks a new feature had been added to her case, one which he had never seen before—namely, an acanthosis with pigmentation about the elbows, axillæ, groins, and neck, where it formed a sort of necklace. This blackened, slightly warty, condition occurred at a fold in the neck, and on the inner surface of the elbow on the skin just beyond where it folded when the elbow was flexed.

In the regions affected by the sclerodermia the hair had fallen out; two-thirds of the eyebrows had gone, part of the eyelashes, and now the hair in the axillæ and pubes had begun to fall out also.

The only treatment which, as yet, had been employed had been massage with almond oil, which had been of some slight local benefit. It was proposed to put the patient on a course of thyroid treatment.

Dr. J. J. PRINGLE said the case did not exactly accord with anything he had ever seen or read of. The occurrence of sclerodermia after oedema was common, but the supervention of this acanthotic condition with pigmentation was, as far as he knew, unique. In a few cases of sclerodermia, during the last year or two, he had seen some encouraging results from treatment with extracts of ductless glands, which Dr. MacLeod suggested in his remarks, and about which he knew more than he did. He had used a preparation of Martindale's, called "four gland tablets," each of which contained 1 gr. of thyroid, thymus, suprarenal and pituitary gland substance. It was asserted that the combined correlated action of these various substances was an essential factor in their utility.

Dr. G. PERNET thought this was eminently a case in which thyroid extract should be tried. With regard to the girl he showed at a previous meeting, with

morphea and sclerodermia of the thighs, for a long time she did not respond to thyroid, but ultimately she improved very much and did better than he thought she would. The improvement was very tardy. Since then, at the West London Hospital, he had had a case of œdemato-sclerodermia of both legs in an elderly woman. Noticing scars of old syphilitic trouble about one knee, he put her on mercury, with much benefit. He thought inquiry should be made as to specific trouble, especially when there was a history of miscarriages, and where there seems a possibility of syphilis he would give mercury and extract of thyroid as well in suitable patients. He did not mean to imply that sclerodermia was syphilitic in origin, but syphilis might play an underlying part in some cases.

Dr. F. PARKES WEBER wished to draw attention to the earliest symptom in this case of sclerodactylia and generalised sclerodermia—namely, the “going white” of the finger tips occasionally. Similar symptoms were not rarely noted at the commencement of generalised sclerodermia with sclerodactylia. This did not mean that sclerodactylia was generally associated with Raynaud’s disease, for he believed the “going white” of the fingers was due to the same cause as the sclerodermia—probably some disorder of the internal secretions. Thyroid treatment might be beneficial. But, even apart from treatment, he did not think that the present case was hopeless, because as long as a case was in the hypertrophic stage, as distinct from the atrophic stage, there was always a chance of retrogression, and more or less clearing up of the condition. He had never seen or read of a case of sclerodermia associated with acanthosis-like thickening and “epidermic pigmentation,” such as was a striking feature of Dr. MacLeod’s present case.

Dr. S. E. DORE did not question Dr. MacLeod’s diagnosis, because there were definite sclerodermatous changes, but he thought the question of myxœdema was worth investigating in this case. The curious œdema, and loss of hair from the eyebrows and other parts, were, he thought, at least suggestive, and there were analogies between the two diseases.

Dr. A. EDDOWES had under his care a case of very well marked Raynaud’s disease, in which symptoms of myxœdema had recently developed.

Dr. MACLEOD (in reply) pointed out that the patient was not mentally sluggish, and that her skin was hard everywhere. That seemed to put myxœdema out of court.

Dr. DUDLEY CORBETT showed a case of *lymphadenoma with cutaneous lesions*. (The case is described in detail on pp. 42–46.)

Dr. J. H. STOWERS (President) showed a case of *Sclerema neonatorum*. The patient was a male infant, aged 3 weeks, well nourished, and of healthy parentage. The child was born a few minutes before the doctor’s arrival, and he found it in a marked state of semi-asphyxia, due to prolonged compression, requiring sustained artificial respiration to resuscitate it. He stated that at birth, and for several days afterwards, the abnormal conditions now so manifest did not exist. The sclerosed skin involving the whole of the back and neck,

which was now so marked, together with the vascular congestion, giving it a deep purple colour, gradually developed. Subsequently a like change involved the skin of the upper arms, and the large knotty lumps, which felt like "solidified fat," were discovered on the front and outer aspects. The remainder of the body and limbs, together with the face and scalp, were unaffected. The healthy condition of the child at that time (for it took the breast eagerly, and slept and functioned well) made it not improbable that the pressure to which it was subjected was a determining feature in producing the sclerema, and, with careful treatment, justified a favourable prognosis. He learned that improvement had already taken place, and that parts of the sclerosed integument were more supple. The mother had had six other children, all of whom were born in a healthy state.

Major GRAY remarked that although one saw it stated in books that this type of sclerema occurred in unhealthy and wasted infants, the few cases of it he had seen, with one exception, had been in healthy-looking children. One soon lost sight of these cases, but he thought there could be no question that these lesions disappeared as the children grew up. In one case in which he watched the condition there was considerable improvement. He believed it was generally held that these masses were due to an alteration in the chemical composition of the fat. When he was Resident Medical Officer at the Queen's Hospital for Children, Dr. Carpenter had some fat removed from such a case, and analysed by a chemist, but he thought there was no marked change found in the composition. With regard to the extreme congestion on the back, it was conceivable that the mass was causing some obstruction to the venous return, but there was no evidence of any superficial hæmorrhage into the tissues.

Dr. J. J. PRINGLE was very glad to confirm the good prognosis given in this case by the President and by Major Gray, as the outlook in these cases was indubitably generally good, in contrast to that of *œdema neonatorum*, a very different disease, which might conceivably, however, be mistaken for this condition.

Mr. H. C. SAMUEL showed a case of *acquired syphilis in a girl*, aged 8 years. The girl had a primary chancre on the lip, a large mass of glands in the neck, and typical roseola on the body, with mucous patches on the vulva and anus. The interesting point was that her mother had syphilis five years ago; she was treated with mercury for some time, and was discharged with a negative Wassermann reaction. As recently as a year ago she gave birth to a baby with congenital syphilis; the infant was treated by Dr. Stowers with blue unction for three months, but since then had not been brought to

hospital. A point of interest was, how had this girl become infected? She had had a wart on the side of the lesion for two years, and the mother said that she had been picking at the wart recently, and that was probably how she infected herself. Had any other members of the Section had a case of chancre of the lip in so young a child?

The PRESIDENT thought there was no doubt that this child had been infected by the infant, her sister, by kissing, the latter being the subject of well-marked congenital syphilis, including mucous patches in the month, and was now under his care. The amount of gland swelling was limited at present, but might increase. He had seen a primary chancre on the lower lip of a child younger than this patient.

Dr. J. J. PRINGLE asked how he proposed to treat the case, whether he thought any of the arseno-benzol preparations were applicable to so young a patient, and if so, which was most suitable. If not, what was his opinion as to the probable result of mercurial treatment, and the duration of the mercurial treatment likely to bring about a cure? He had, himself, extreme difficulty, from the mechanical point of view, in dealing with cases of this sort by intravenous injections, and he had no very definite opinion as to how long treatment by mercurials was necessary to obtain a cure.

Mr. McDONAGH said that if this case were under his care he would prescribe the same treatment as for an adult case, only giving smaller doses. He had given many intravenous injections to children of this age (8) with success, although he admitted in some cases it was difficult. Should this patient belong to the latter class, then he would rely upon intramuscular injections. First of all he would give an intravenous injection of collosol iodine (100 c.c.), then, forty-eight hours later, and again three days later, two intravenous injections of a metallic compound, which he would repeat twice at weekly intervals, after an intramuscular injection of intramine (2.5 c.c.). The intramine should be prescribed five days after the third and a week before the fourth intravenous injection. For the next two or three years, according to the condition of the patient, he would prescribe the mixed treatment of mercury, iodides and intramine. If the patient's nervous system showed signs of being infected, which was so frequently the case when the chancre was situated in the buccal region, and the symptoms usually appeared between the eighth and twelfth week after the commencement of the treatment, he would about this time prescribe an intravenous injection of collosol iodine, followed by an intramuscular injection of intramine, and then by two intravenous injections of a metallic compound. He would like to say that treatment could not be regulated by the Wassermann reaction, a reaction which was also useless as a test of cure. A negative Wassermann reaction meant nothing, and a positive reaction only that the patient had had syphilis.

Dr. S. E. DORE wished to mention a case which he had at the Evelina Hospital, and which he showed at this Section in June, 1912. It was that of a girl, aged 10 years, with a genital chancre, secondary eruption, and syphilitic leucoderma on the back of the neck. The mother gave a positive Wassermann

reaction, and there were two other children infected, one aged 5 years, and a baby aged about 6 months. The elder child was taken into the hospital and given an intramuscular injection of neo-salvarsan. The injection was followed by sloughing and an extensive scar resulted from the incisions which had to be made. Subsequently all three children did very well on mercury by the mouth. He noticed that lately arseno-benzol preparations had been injected into the superior longitudinal sinus in infants, and should like to ask whether Mr. McDONAGH or any other member had had experience of that method.

Mr. McDONAGH had had the opportunity of giving intravenous injections by way of the anterior fontanelle in infants. Like intraspinal injections, theoretically, the procedure appeared formidable, but in actual practice both were simple, efficacious, and devoid of risk.

Dr. EDDOWES asked if the President remembered that, many years ago, before salvarsan was dreamt of, the older practitioners considered that mercury easily upset patients of this age. Was there any ground for that belief? They gave mercurials freely to babies and adults, but feared giving large doses of mercury to children of 10 or 12 years of age. He had not noticed anything to justify that fear in his own practice.

Major GRAY asked Mr. McDONAGH, as he considered the Wassermann reaction useless, whether he would use any serological test at all, to control the treatment—his "gel" test, or the ultra-microscope for example.

Mr. McDONAGH replied that he could not at present give an opinion as to whether the ultra-microscope or the "gel" test would serve to regulate treatment, but there was no doubt that they gave a much more accurate picture of the patient's condition than could be obtained with the Wassermann reaction.

Major GRAY pointed out that some time ago Noguchi worked out a complement fixation reaction, using an emulsion of his cultured spirochaetes as antigen, and he believed obtained different results from the Wassermann test—that is to say, his test corresponded more to the true complement fixation test as employed in such conditions as typhoid fever. Had Mr. McDONAGH any experience of this test.

Mr. McDONAGH stated that the reason why Noguchi's spirochetal extract did not act well as an antigen in the Wassermann reaction was presumably due to the amount of unsaturated fatty acids that such an extract contained. Unsaturated fatty acids, owing to their influence upon surface tension, prevented positive sera from giving positive results.

Major GRAY said that Mr. McDONAGH rather suggested that any sort of serological test was useless. That meant that they must fall back on clinical relapses as a criterion of cure or otherwise. Perhaps the patient would not develop any other symptoms of the disease until she was aged 30 or 40 years. Under those circumstances their knowledge of the treatment of syphilis by modern methods certainly did not enable them to guarantee a cure after any particular course of treatment.

Mr. McDONAGH replied that once a case had reached the generalisation stage, a cure in the strict sense of the word could not be guaranteed, therefore one advised that treatment which clinical experience had proved to give the best results in the majority of cases. In such a case as this he did not think the disease would ever be cured.

MEETING held December 21st, 1916, Dr. J. H. STOWERS, President of the Section, in the Chair.

Dr. GEORGE PERNET showed a case of *Morpho-sclerodermia*. The patient was a man, aged 54 years, who showed symmetrical patches of sclerodermia on both shins corresponding to the areas occupied by the greaves or cnemides of the ancient Greek hoplite. He also gave a history of a spontaneous fracture of the right femur some sixteen years previously and of the right tibia within the last three months. (The case will be reported in detail in a subsequent number of the Journal.)

Dr. F. PARKES WEBER said there could be no doubt that Dr. Pernet was right with regard to the sclerodermia, but the patient had likewise a symmetrical and painless, or relatively painless, form of Paget's Osteitis deformans, apparently limited to the bones of his legs, the shape of which were obviously altered by the disease. Spontaneous fractures, or fractures from relatively slight violence, had been occasionally observed in cases of Osteitis deformans.

The PRESIDENT thought there was corroborative evidence of Osteitis deformans in the condition of the patient's spine, which was distinctly curved. He had not seen the two conditions associated before. He considered that the skin condition was better described as sclerodermia rather than as morphea, a term which should be limited to the circumscribed form.

Major GRAY asked whether Dr. Parkes Weber could tell them whether there was any known association between deficient or increased secretion in the thyroid gland and Osteitis deformans. The supposed association with sclerodermia was, of course, well known.

Dr. PARKES WEBER (in reply to Major Gray) thought thyroid treatment had been tried in Osteitis deformans, but he did not think it had been proved that there was any causal connection between thyroidal disease and Osteitis deformans.

Dr. PERNET (in reply) said that when the patient was first seen by him there was a slight but definite lilac border round the sclerosed areas: hence he preferred to call it *Morpho-sclerodermia*.

Dr. W. KNOWSLEY SIBLEY showed a case of *psoriasis and Lichen atrophicus*. The woman was aged 67 years, a widow, and appeared quite healthy. She told him that about four years ago a rash commenced on the inner side of her left knee, and from then until the present time she had had a rash appearing on various parts of her body. She now presented a typical psoriasis on her knees and elbows, a little on the outer surface of the right forearm, and a patch beneath her right breast. She also had a good deal of superficial scarring occurring on the anterior surface of the right wrist in a

band form, and also slightly on the left wrist; a large area of pale scarring over the right sterno-clavicular region; a patch of guttate scars on the back of the neck, also slightly on the left shoulder, and one or two isolated patches besides. Also, she had suspicious-looking lichen patches on her buccal mucous membrane. She had definite psoriasis: had she not also Lichen atrophicus? From the band-like formation of some of the lesions, and their distribution, he fancied she had. Alternatively, had she sclerodermia on her chest? He had brought the case forward to elicit opinions.

Dr. G. PERNET thought there was no doubt about the psoriasis in this case. But with regard to the patch over the right clavicle, it appeared to be a combination of atrophic morphœa and sclerodermia, which usually in that area, in his experience, began in bands, and unilaterally, forming patches ultimately by coalescence. The hand on the flexor aspect of the right forearm appeared to be of the same nature. He was not able to see, in that light, anything on the buccal mucous membrane.

Dr. S. E. DORE thought there was no question that the eruption was psoriasis. The atrophic lesions he regarded as part of the same disease. He did not know whether Dr. Sibley had been able to trace the evolution of the lesions, but he thought the papules on the arm were those of psoriasis and not Lichen planus. His view was that this was a case of psoriasis in a woman who had senile atrophic skin. He could not see anything in the buccal mucous membrane to suggest Lichen planus.

Dr. F. PARKES WEBER said there could be no doubt about the existence of typical psoriasis in the case. The patient also had typical senile anetodermia on the back of both hands. Were they to suppose there was a third condition present—namely, sclerodermia? He thought Dr. Dore's suggestion as to the atrophic scarring being the result of the psoriasis in a patient with senile tendency to skin atrophy was worth consideration. The position in the neighbourhood of the right clavicle was certainly characteristic for superficial sclerodermia, though when occurring in that situation it was usually found on both sides and not unilaterally, as was the scarring of this patient. He hesitated to suggest there was sclerodermia present as well as senile anetodermia and psoriasis. In regard to the question of Lichen planus he could not see any spots in the mouth, and he would not be inclined to admit the presence of any form of Lichen planus.

The PRESIDENT agreed with Dr. Sibley's view of the case, which was supported by the distribution of the lesions. He had a coloured drawing of a well-marked case of Lichen planus sclerosus, sen atrophicus, sen morphœicus, quoted by Crocker in the third edition of his book and originally shown at the Dermatological Society of London, the distribution of which entirely corresponded with the case before them. The patient was also the subject of psoriasis coincidentally, although lesions of a psoriasiform appearance were frequently seen in severe and chronic forms of lichen and were misleading. Senile atrophy was not limited to the areas involved in this case but was more general in character.

Major GRAY asked Dr. Dore whether he had seen any other cases of psoriasis occurring in patients with atrophic skin and leaving scars such as were seen in this case. Personally, he was not familiar with them.

Dr. S. E. DORE (answering Major Gray) said he had not, even in senile patients, but he saw no reason why such a state of affairs should not occur. He would ask Dr. Sibley whether treatment of a somewhat severe kind might not have induced this atrophic condition.

Dr. SIBLEY (in reply) said that the area which was in favour of his contention that this condition was the result of psoriasis was the right forearm just below the elbow, where there was progressive scarring, and where the patient still had psoriasis in connection with it. The lesions which were against that view were the band-like formations at the wrist and the back of the neck, over the Ligamentum nuchæ. With regard to severe treatment, this patient had been under him for a year, and she had had only mild placebo treatment: she had not had X-rays, or anything of that kind.

Dr. W. KNOWSLEY SIBLEY showed a case of *symmetrical gangrene of the skin*. The patient, a French woman, aged 60 years, was a cook by occupation. On Saturday last, while walking, she felt a fullness on the inner side of both her thighs, later she found her clothes saturated with liquid, and thought she must have evacuated the contents of her bladder. When he examined her, he found large symmetrical gangrenous masses on the inside of her thighs about 6 in. in diameter, obviously the result of broken blebs. She said she had no symptoms before the blebs appeared. On the following day she applied a little vaseline. Presumably it was a staphylococcus infection. He had only that day seen the patient for the first time.

Major GRAY did not agree that these lesions were likely to be due to a staphylococcal infection, though they might well be streptococcal. There seemed no doubt that the lesion started as a bleb, and it must have spread very rapidly, causing considerable superficial destruction of tissues. The case appeared to be similar to two cases which were described in the *British Journal of Dermatology*,* by Dr. MacCormac, in which there was a rapidly-spreading streptococcal infection, with deep ulceration. This sort of lesion might well occur in a diabetic, whose skin was specially susceptible to organismal invasion. It would be interesting to hear the result of an examination of the urine.

Dr. F. PARKES WEBER suggested that these symmetrical lesions on the inner upper aspects of the thighs might have a partly artificial origin. There might have been an unsuspected superficial traumatism from the friction of her clothes at a time (the weather was extremely cold and "raw") when the skin was very susceptible. There might have been some incontinence of urine, that was to say, the patient might have passed a little urine involuntarily, as she herself at first thought she had done. The condition now seen might thus

* *Brit. Journ. Derm.*, 1916, vol. xxviii, No. 336-8, p. 318.

be the combined result of local cutaneous irritation by friction, by maceration in urine, and by secondary infection.

The PRESIDENT thought it was very important that an examination of the genito-urinary organs should be made in this case having regard to the age of the patient and the possibility of sepsis arising therefrom. The gangrenous looking plaques might be explained by secondary local infection.

Dr. S. E. DORE suggested that it might be a case of *Dermatitis repens*.

The PRESIDENT said the case did not correspond with *Dermatitis repens*, a case of which, involving both hands and feet, he had published in the *British Journal of Dermatology* in 1896, with coloured illustrations. They would be glad to see the patient again at a subsequent meeting, if possible.

Note.—*Bacillus coli* was subsequently isolated from the pus.

Dr. ALFRED EDDOWES showed a case of *transitory keloid excited by Urticaria papulosa*. The boy, aged $2\frac{1}{2}$ years, was said to have been a six months' child, born with "eczema." He was mentally deficient and had left hemiplegia. The lesions to which his attention was first drawn consisted of a network of keloid-like bands occupying in some cases an area of several inches wide and occurring in groups. In connection with each group there appeared to be a papule in different stages of inflammation apparently the result of scratching. Though the keloids may be described as transitory there were indications of resulting atrophy of them practically all over the skin, especially on the trunk and limbs. The child's general health was greatly improving under treatment. He could see plainly to-day that the condition of the skin no longer had that dull look and wasted feel that it had even a week ago. No family history had yet been obtained. He would submit that they had here an instance of a *congenital tendency to keloid* and that the exciting cause was *Urticaria papulosa* plus traumatism.

The PRESIDENT regarded the case as an unusual and aggravated form of what was described as *Lichen urticatus, vel pruriginosus*, in which the papules were unusually severe and lasting, this leading to the appearance which Dr. Eddowes spoke of as keloid. He took it he did not mean true keloid, but merely a transient condition with remote keloidal appearances. Some of the manifestations had been of short duration. The one essential feature was pruritus of severe kind, intensified probably by the defective state of the child's nervous system and by superadded nutritional disorder. Without doubt much that was now visible resulted from secondary friction and scratching.

Dr. F. PARKES WEBER admitted that the condition looked, at first, something like keloid or pseudo-keloid, but he did not believe that either keloid or pseudo-keloid had anything to do with it. He doubted even whether any scar tissue would be found in these curious reticulate-shaped patches of raised and

thickened skin. He hardly thought that it was possible to tell at present what the condition really was, though one might suggest the possibility of its being a kind of Erythema perstans with a network-like distribution. One or two places looked as though they might break down, and that made one also think of the possible presence of tuberculosis.

Dr. EDDOWES (in reply) said that the case had been under his observation only a week. Some of the bands which he regarded as keloid were well formed, while others were quite new. He thought it was due to urticaria, plus a congenital peculiarity of the skin which easily tended to form keloid. He did not hold the view that any particular organism must necessarily be associated with keloid; they got keloid in acne and in many other conditions. A keloid of the chest could be produced by a nurse putting on a mustard plaster and leaving it on too long, especially in the case of young children. In this case there were indications of fibrous thickening running along what he presumed were vessels in the cutis. It behaved exactly like a keloid, resulting from a burn. With regard to the term "*Lichen urticatus*," he thought the newer name "*Urticaria papulosa*" was better: he would have said that they were one and the same affection. Careful examination of the patient would show that there had been attacks of this on most other parts of the body. The lesions disappeared and left fine atrophic striae.

At the meeting held October 19th, 1916, and reported in the last issue of the Journal, Dr. A. J. CHALMERS and Captain A. F. C. MARTYN, R.A.M.C., read a paper on "Acutis in an Egyptian Soldier."

The patient was an Egyptian soldier, aged 27 years, who sought advice for a discrete papular eruption on the face, neck, and dorsa of the hands—the parts exposed to sunlight—which began suddenly and was accompanied by fever. The patient had two attacks, both of which were quickly cured by intestinal antiseptics.

The histology of the lesions resembled that of a tuberculous lesion in so far as the epithelioid and giant cells were concerned, but differed from the latter in that no tubercle bacilli could be demonstrated, and, moreover, animal experiments proved negative. The von Pirquet reaction of the case described was positive.

The authors look upon acutis as an eruption, caused by a poison generated, under the influence of sunlight, by cutaneous cells sensitised to the tuberculous virus and attacked by the products of an intestinal auto-intoxication, the whole process being anaphylactic in nature. The obvious line of treatment was that directed against the intestinal auto-intoxication in the very early stages of the complaint.

CURRENT LITERATURE.

INFLAMMATORY AFFECTIONS.

ACRODERMATITIS HIEMALIS. M. B. HARTZELL, M.D. (*Journ. Cut. Dis.*, 1916, November, xxxiv, p. 791).

IN this paper a series of four cases of Acrodermatitis hiemalis is reported. There was nothing unusual about any of them. The eruption was made up of a limited number of small, flat, dull-red papules, a lesser number of small erythematous patches and a few vesicles, strictly limited to the fingers in the majority of cases, coming out in small crops at intervals of two or three weeks in the autumn and winter and usually accompanied by itching and burning. The cases all occurred in young adults, three in women and one a man, a car-driver by occupation. The cases differed from the majority of those reported by other observers in the absence of pustulation and scarring. They seemed to be closely related to chilblains on the one hand and to the papulo-necrotic tuberculide on the other. The local remedy which afforded most relief was ichthyol, 25 to 30 per cent. solution in water being painted on the affected parts in the evening, allowed to remain all night, and washed off the next morning.

J. M. H. M.

RECURRENT ACRODERMATOSIS OF WARM COUNTRIES.

R. RINZ-ARNAU, M.D. (*New York Medical Record*, October 14, 1916.)

THE author describes as "recurrent acrodermatosis" an affection which is common in Brazil. He considers it to be the clinical expression of primary radical lymphectasia. It chiefly occurs during the period of unstable hypothermic conditions which prevail during the months between the two yearly seasons. The complaint begins with a violent itching in those regions where the lesions are to appear, particularly in the interdigital spaces. Later small, hard papules the size of a pin's head become visible. They are painful to pressure and rapidly become a large vesicle separating the epidermic layers to become a blister. They finally burst, revealing a base which has a central crateriform depression yielding an exudate. He considers that this lesion is formed by the varicose enlargement of subpapillary lymphatic rete. The capillaries finally yield and the exudate either raises up the epidermal layers *en masse* or infiltrates and disintegrates them.

The evolution of each lesion lasts from five to seven days and is occasionally accompanied by a slight lymphangitis. The feet are most commonly affected, usually one after the other. The dermatosis of the hands is similar in character, though of a more eczematous appearance.

In any case rest in bed is advisable. In the prevesicular stage the application of a 1 per cent. solution of picric acid is very useful, sometimes aborting the eruption. During the second stage, after a preliminary cleaning up with hot fomentations, an ointment of 15 per cent. ichthyol is advised. In the last stage he prescribes dermatol, which accelerates the drying and resolution of the affected surfaces.

D. C.

THE FOLLICULAR TYPE OF ECZEMA SEBORRHÆICUM. W. B. TRIMBLE, M.D. (*Journ. Cut. Dis.*, January, 1917, xxxv, p. 11.)

THIS type of seborrhœic dermatitis consists of patches of a brownish-red colour made up of inflammatory follicles situated close together but always discrete. These follicles are slightly pink and enlarged with dilated mouths; in each opening and around it is seen a piling up of small greasy scales, making a tiny cone, each follicle being a miniature lesion of seborrhœic eczema. It is met with chiefly in the usual sites, namely, the chest and upper back, scalp, and hair border.

According to the writer, follicular seborrhœic eczema is of two varieties, local and diffuse, the local form being fairly common, the diffuse rare. It is practically confined to the upper half of the body and mainly to the trunk. It is always associated with Pityriasis capitis, which is moderate in degree in the local form but abundant in the diffuse variety. An oily seborrhœa of the face may also be a concomitant symptom.

The writer considers that the term "follicular seborrhœica" is more appropriate than the older term of the follicular type of seborrhœic eczema. J. M. H. M.

ELEPHANTIASIS NOSTRAS. J. A. ELLIOT, A.B., M.D., Ann. Arbor. (*Journ. Cut. Dis.*, January, 1917, xxxv, p. 17.)

IN this contribution a case of Elephantiasis nostras in a girl, aged 19 years, is described. The elephantiasis had its starting point in an ulcer which formed at the site of vaccination on the arm, and extended from the shoulder over the back of the hand as far as the distal end of the first phalanges, where it ended abruptly. The skin was greatly thickened and so firm in places as to give the impression of a fibroid tumour. When incised, a small amount of lymph poured out from the incision.

Like other observers, the author considered that a large number of cases of Elephantiasis nostras are due to the streptococcus of Fehleissen. He believed that the primary changes were in the blood-vessels rather than in the lymphatics, and that the secondary changes consisted of lymph stasis, œdema, marked hypertrophy of collagen with an infiltration of small round cells and polynuclear leucocytes.

J. M. H. M.

ON A RARE FORM OF SCLERODERMA. A. RAVOGLI, M.D. (*Journ. Cut. Dis.*, January, 1917, xxxv, p. 1.)

THE patient was a man, aged 32 years, employed as a policeman. He considered that the scleroderma had its origin in a chill contracted on night duty, when he was caught in a heavy rainstorm and had to remain the rest of the night with his wet clothes on. As a result of this he began to suffer from pains in the spinal region, which confined him to bed; these pains disappeared, but his arms and legs became so stiff that he could scarcely walk. Soon after this morphea patches appeared on the arms and legs, and the skin of the elbows became œdematous and rose-red in colour. A similar condition appeared about the knees, which gradually spread until sclerodermic patches covered nearly the whole of the anterior surface of the thigh. Subsequently ulcerating patches developed on the leg, the ulcers having a thick hard base with elevated edges covered with warty granulations and resembling epitheliomatous ulcers.

From a consideration of the case the author came to the following conclusions with regard to the disease :

- (1) The scleroderma was probably due to peripheral neuritis.
- (2) The system was affected by a form of diathesis which had disturbed the equilibrium of the internal secretions.
- (3) The sudden change of temperature acted as a determining cause.
- (4) The granulating ulcers were merely an accidental manifestation on the sclerodermatic patches.

J. M. H. M.

FUNGUS INFECTIONS.

THE VARIETIES OF RINGWORM FUNGUS MET WITH IN ALGIERS. J. BRAULL and A. VIGUIER. (*Annales de Dermatologie et de Syphiligraphie*, 1916-1917, vi, No. 4, p. 169, July, 1916.)

METHODICAL examination by cultures of the cases of ringworm attending the Civil Hospital of Mustapha during the years 1912-1916 has given the following results: Fifty-six cases of ringworm of the scalp—*Trichophyton acuminatum*, 33 cases; *T. violaceum*, 14 cases; *T. crateriforme*, 4 cases; *T. plicatile*, 1 case; *T. cerebriforme*, 1 case; *T. granulosum*, 1 case; *T. luxurians*, 2 cases. Of these 1 case of *T. crateriforme*, 1 case of *T. granulosum*, and 2 cases of *T. luxurians* were kerion, and 1 case of *Trichophyton acuminatum* in the axilla. The writers have observed only 1 case of Microsporon in Algiers, and that was in 1906. No cultures were made. Epidermophyton is fairly frequent. Achorion schoenleinii is prevalent, and Achorion quinckeum sometimes met with.

H. G. A.

A CASE OF SPOROTRICHOSIS. DAVID M. GREIG, C.M., F.R.C.S. (*Edin. Med. Journ.*, January, 1917, p. 42.)

THE patient, a man, aged 32 years, was referred to the writer in March, 1913, suffering from ulceration of the skin about the right shoulder and breast of two years and four months' duration. In December, 1910, he injured his finger with a piece of the rock with which he was working as a miner in South Africa.

The wound of his finger healed in a day or two, but was followed by an abscess in the axilla which was incised and continued to discharge. He was sent into the Johannesburg General Hospital in which he was kept for a year and nine months. The lesion was scraped about every two months for the first eight months and subsequently a vaccine was administered. Another operation was performed in November, 1911. The laboratory report stated that the condition was not tuberculous or malignant. Further abscesses and ulcers formed, and in March, 1912, he had an intravenous injection of salvarsan which had no effect upon the ulceration. In November, 1912, he returned to this country and was told that the condition was tuberculous, further operations being performed. When the writer saw him in March, 1913, there was an area of cicatrization and ulceration which extended from the clavicle to the right nipple and under the arm to the back of the axilla. There was an abscess under the deltoid, and a drainage tube had been inserted in front of the clavicle and another at the posterior part of the axilla. Over the sixth costal cartilage there was a recent patch, exuding thin pus of a brown colour from minute openings and suggestive of tubercle.

Treatment was by 2 per cent. solution of iodine in rectified spirit locally and iodide of potassium internally in increasing doses until he was taking 25 gr. thrice daily. This treatment was commenced in April, 1913, and in January, 1914, the wounds were entirely healed and the edema of the upper limb had disappeared.

Considering the differential diagnosis between tubercle, syphilis, and carcinoma on one hand, and actinomycosis, streptotrichosis, and sporotrichosis on the other, all these except the last had been excluded before the writer saw him. Actinomyces and streptothrix had been searched for by Prof. Sutherland, who examined the author's specimens and confirmed his diagnosis. Sporotrichosis, as the writer observes, is one of the rarest skin affections found in this country, and all the cases, with one exception, have been imported. The originating injury seems to be invariably inflicted by abrasions or cuts during the handling of certain rocks or earth. The initial lesion is slight and appears trifling. The secondary lesions are progressive and dangerous to life. The patient in this case made a complete recovery, and was not incapacitated from a life of hardship on the veldt to which he has returned.

S. E. D.

HYPERKERATOSIS.

KERATOSIS BLENNORRHAGICA. M. HAASE, M.D. (*Journ. Cut. Dis.*, December, 1916, xxxiv, p. 817.)

IN this communication a typical case of gonorrhoeal keratosis is recorded. The patient was a man, aged 28 years, who had had four attacks of gonorrhoea. There was a generalised eruption over the body: the entire scalp was covered with a thick yellowish crust: on the face, in the axillae, and about the genitalia there was an erythematous-squamous condition like exaggerated seborrhoeic dermatitis: on the chest and buttocks were circinate lesions with a crusted border: on the legs and forearms were translucent horny lesions varying in size from a pea to 1½ in. in diameter, some conical in shape, others flat or depressed in the centre: while on the soles of the feet were elevated plate-like thickenings of the epidermis of a brownish-yellow tint. A histological examination of the older lesions showed microscopical vesicles within the prickle-cell layer and a hypertrophy of the epidermis, and in the corneum there was a diffuse infiltration in the sub-papillary layer in which was a relative increase in the number of plasma cells.

J. M. H. M.

PIGMENT ANOMALIES.

AN UNUSUAL VARIETY OF VITILIGO (LEUCODERMA ACQUISITUM CENTRIFUGUM). R. L. SUTTON, M.D. (*Journ. Cut. Dis.*, 1916, November, xxxiv, p. 797.)

Two unusual cases of vitiligo are here described in which the lesions closely resembled one another. Both the patients were women, aged respectively 22 and 16 years. The lesions consisted of small de-pigmented patches, circular in diameter and about 2 centimetres in outline, with a small, roundish maculopapule in the centre of each. There was no hyper-pigmentation surrounding the white areas. The lesions were said to have begun as minute brownish points usually sufficiently elevated to be perceptible to the touch.

A histological examination was made of the central papule of one of the lesions. The epidermis was found to contain a large amount of pigment and the papillae were hypertrophied and swollen, but the most striking change was the presence throughout the corium of masses of tissue of endothelial origin which stained deeply with basic dyes.

J. M. H. M.

NEW GROWTHS.

A CASE OF DARIER'S DISEASE IN ITS EARLY STAGES.

M. SCHEER, M.D. (*Journ. Cut. Dis.*, December, 1916, xxxiv, p. 837.)

THE object of this paper was to record a case in which the age of the eruption was said to be only one month when it was first seen by the writer. The diagnosis was only established when the characteristic "corps ronds" were found on microscopical examination. The lesions were typical and were warty in character, and situated on the insides of the thighs, bends of both elbows, femoral regions, etc.

J. M. H. M.

PATHOLOGY.

OBSERVATIONS ON THE CUTANEOUS TUBERCULIN REACTION IN TUBERCULOSIS.

F. H. HEISE, M.D. (*Amer. Journ. Med. Sci.*, 1916, vol. cli, p. 862.)

THE author has carried out a series of interesting observations on incipient and moderately advanced cases of tuberculosis at a sanatorium. The intradermic method was used, and the dose of tuberculin increased till a local erythema, 20 mm. in diameter, was produced. Koch's O.T. was employed, commencing with 0.0000001 c.c. and increasing the dose ten times till the desired result was obtained; the same volume was always injected. The observations are too detailed to be recorded here, but the conclusions arrived at by the author are: (1) The nature of the focus of infection at the time of the test influences local hypersensitiveness. (2) The quantity of tuberculin necessary to incite a local reaction of 20 mm. diameter bears no relation to the stage of the disease. Therefore a single skin test, when positive, means nothing but the existence of a previous infection.

A. M. H. G.

CLINICAL, HISTOLOGICAL, AND RADIOLOGICAL STUDY OF A MYXO-SARCOMA TREATED WITH X-RAYS.

CL. REGAUD and TH. NOGIER. (*Journ. de Radiologie et d'Electrologie*, May-June, 1916.)

THIS careful and extremely interesting study following upon work of a similar kind carried on by the authors for several years is worthy of every attention. The conclusions to be drawn from this case cannot fail to be of value to those who have to treat with X-rays superficial tumours of the skin of any kind.

These observers have found, as the result of numerous observations to be published later, that when a tumour is treated with successive spaced doses of X-rays its radio-sensibility, instead of remaining constant, diminishes from one application to another. Certain tumours originally very radio-sensitive finish by becoming refractory, and this phenomenon is not accompanied by any appreciable change of structure. The case published is a typical example. It was a myxo-sarcoma of the temporo-parietal region in a girl, aged 12 years. The tumour

was in shape a truncated cone, its base about 10 cm. in diameter, and 5 cm. in depth. On the summit was an ulcerated area about 7 cm. in diameter.

During 6 months 11 spaced doses of X-rays were given and 7 biopsies made. Three drawings of these are shown. The doses were measured by Bordier's method with the pastille on the tumour, and amounted in all to 96 H. or 19 B. The focal distance was about 20 cm., and filters of 3 mm. aluminium were employed.

The first irradiation produced a considerable diminution in the size of the tumour as well as a severe systemic disturbance due to the absorption of the products of cell destruction. The temperature began to rise on the day following the exposure, and on the tenth day reached 104° F., and remained at that point for about five days before subsiding. There was loss of appetite and repeated vomiting.

The second irradiation hardly affected the size of the tumour, and produced no general symptoms worth mentioning. The following ones only produced feeble local effects without general symptoms. The last were useless.

Successive biopsies showed that after a temporary disappearance of neoplastic cells, the tissue of the tumour resumed its original structure.

(1) It was thus demonstrated that the radio-sensibility did not remain constant; it never increased, but always diminished.

(2) This diminution can be explained by an auto-immunisation of the cells of the tumour against the effect of the rays, which in its turn is due to some change in the tissue fluids caused by the absorption of the products of cell destruction.

(3) The intensity of the general symptoms due to the toxic absorption decreased equally with the radio-sensibility of the neoplasm, a point in favour of a definite relation between the two phenomena.

(4) The primary dose, 10 H., did not produce a homogeneous effect throughout the tumour: only about half the tumour was sterilised. Further this dose produced a profound general reaction.

(5) No disadvantage has hitherto been experienced in treating neoplasms of the given slow malignancy with special doses. On the other hand, in other cases the splitting up of the dose is a fatal proceeding, because it allows the neoplasm to immunise itself against the rays. This is the case with large cancers of the breast, in epitheliomata of the skin, and in certain sarcomata (of which the above case is a striking example).

On every occasion where from its position, size, and radio-sensibility one might hope to effect a radical cure of a tumour by a single massive exposure, this method seems preferable to the splitting of the dose.

(6) On every occasion when dealing with large neoplasms, the application of a single massive dose may be both ineffective and dangerous; ineffective because of the impossibility of the rays reaching the deeper layers of the tumour, and dangerous because of the severe toxic phenomena which result from the death of such a large mass of cells.

(7) They suggest that the above-mentioned difficulties can be avoided by the combination of surgical excision and radio-therapy according to the following plan:

1. (a) Single massive irradiation, the quantity of the rays, their quality, and focal distance being calculated with the idea of producing a homogeneous effect throughout the mass of the tumour.

- (b) Soon afterwards surgical removal of all the neoplastic tissue as far as possible.
2. After a suitable interval a second application of rays.

This technique has the following objects :

- (1) The suppression of the phenomena of intoxication and auto-immunisation by the removal of the irradiated tissue before absorption begins.
(2) A safeguard against the possibility of metastasis occurring after operation by sterilising the malignant cells as completely as possible.
(3) The preparation of the neoplastic area for a final effective irradiation by the removal of all the visible parts of the growth, the malignant cells that remain keeping their radio-sensitiveness intact.

D. C.

SYPHILIS.

A CASE OF CRYPTOGENETIC SYPHILITIC INFECTION, WITH SOME REMARKS ON SYPHILIS "D'EMBLÉE." S. NICOLAU.
(*Annales de Dermatologie et de Syphiligraphie*, 1916-17, vi, No. 4, p. 186, July, 1916.)

CASES of syphilis where no primary sore can be found may be explained as (a) syphilis d'emblée, (b) hidden sores, *i. e.* in the buccal cavity, the anus, and especially the female genital organs, the conformation of which explains the large percentage of "syphilis ignorée" in women (30 per cent. as against 11 per cent. in men, according to Fournier).

Nicolau reviews the published cases of so-called "syphilis d'emblée" and groups them as follows: (a) authentic cases, observed by a medical man from the date of sexual connection with a syphilitic person in which secondary symptoms have developed without the appearance of a primary sore. He gives eight references. (b) Cases in which abrasions after suspected connection have been cauterised or excised and followed by secondary symptoms, often with local gland enlargement, but without formation of primary sore. (c) Cases in medical men who have received a prick or a cut during operation upon a syphilitic patient which has been followed by secondary symptoms without primary sore or local gland enlargement.

The cases cited, and those of the third class especially, demonstrate clearly the possibility of a "syphilis d'emblée." One must suppose that the spirochaetes have invaded the lymphatics directly (or in certain cases with very short incubation period, the blood-vessels) without local proliferation, and this view seems to be confirmed by the experimental researches of Uhlenhuth and Mulzer, who produced syphilis in monkeys and in rabbits without primary sore by intravenous injection of the veins.

A careful study of the facts and symptoms of Nicolau's case leads him to the view that it does not belong to this class of syphilis d'emblée, but to suspect the possibility of a primary sore in the œsophagus or stomach as the result of a contaminated drink.

H. G. A.

SYPHILIS OF THE NERVOUS SYSTEM. J. A. FORDYCE. (*Journ. Cut. Dis.*, 1916, xxxiv, October, p. 713.)

ACCORDING to the writer of this paper the number of patients who show involvement of the spinal fluid in the secondary period of syphilis bears a certain relation to the total percentage of cases of syphilis of the nervous system.

In a series of sixty-three cases of secondary syphilis in which the spinal fluid was examined, 25 per cent. gave evidence of a definite pathological condition with marked lymphocytosis and an increase in the globulin content, while 16 per cent. showed trifling abnormalities, and seven out of the sixty-three cases gave a positive Wassermann reaction. The writer believes that only such individuals who, in the secondary period of the disease, show conspicuous changes in the cerebro-spinal fluid with an increased cell-count, globulin content, and a positive Wassermann, are liable to suffer later from the different clinical types of cerebro-spinal syphilis. He concludes that a certain percentage of such cases are cured spontaneously or during the general treatment of the disease. He considers that all patients at the end of the first year of their infection should be punctured, whether or not they have manifestations or positive signs of the disease. If the fluid remains negative through all the tests, they can be assured with a reasonable amount of certainty that it is unlikely for nervous symptoms to supervene later; also a positive colloidal gold test, with a persistent positive Wassermann in the high dilutions, points to an impending paresis, whether or not the patient shows mental impairment. In addition, he considers that the results obtained in the treatment of tabes would seem to confirm the hypothesis that this affection is primarily an inflammatory process involving the meninges rather than a degenerative process, for if the latter assumption were correct, there could be no hope of deriving benefit from the treatment.

J. M. H. M.

SALVARSAN TREATMENT OF SYPHILIS. Major LLOYD JONES and Captain A. J. GIBSON. (*Brit. Med. Journ.*, February 3rd, 1917, p. 152.)

THIS paper is an analysis of 200 cases of primary and secondary syphilis treated by intravenous injections of salvarsan and intramuscular injections of mercury between May 22nd and September 24th, 1916. The method employed was that laid down by the War Office, viz: (A) Comprised of first to eighth week: eight doses of 1 gr. of mercury, 2·8 grm. of salvarsan. (B) Fourteen days' potassium iodide. (C) Comprised of eleventh to thirteenth week: three doses of mercury, 1·2 grm. salvarsan. Time occupied, fifteen days. In a large percentage of cases it was found that the desired result—that is, a negative Wassermann reaction and absence of all clinical signs and symptoms—was obtained by the end of Course A. If the Wassermann reaction is still positive at the end of Course A, potassium iodide in 10-gr. doses, three times a day for fourteen days, is then prescribed. If still positive, Course C is given. At the end of Course A, 16 of the 125 primary cases still showed a positive Wassermann reaction, and 109 showed a negative reaction. Of 75 secondary cases, 43 still showed a positive and 32 a negative reaction. At the end of Course B, 6 of the 16 primary cases with a positive reaction still showed a positive, and 10 were negative. Of the 27 secondary cases with a positive reaction (16 having ceased treatment), 16 were still positive and 11 were negative.

At the end of Course C all the primary cases showed negative reactions, and of the 16 secondary cases 10 were still positive and 6 were negative.

Of the 200 cases which started treatment, 182 completed the full course where necessary. Of these 172 had negative Wassermann reactions, viz. 123 primary, or 98·4 per cent. of those starting, or 100 per cent. of those completing the full course,

and 49 secondary, or 65·3 per cent. of those starting, or 81 per cent. of those who completed the full course. As expected, the primary stage showed a much higher percentage of negative reactions after treatment than the secondary stage, and a certain number of the secondary cases would probably become negative in a short time, as the final blood tests were made directly the course had finished.

The authors divide the reactions shown by the patients twenty-four hours after injection into three groups: Mild, severe, and local. After 36·6 per cent. of the injections there were no reactions.

In the first group they include: (1) Headache, 27·3 per cent.; (2) diarrhoea, 29·3 per cent.; (3) vomiting, some time after injection, 15·3 per cent.; (4) abdominal pain 18·4 per cent. A large factor entering into all these symptoms is neurosis, which, together with improper dieting, may be considered to cause 50 per cent. of the reactions met with in this group. In the group of severe reactions they include: (1) Cardiac and vascular: (a) Flushing of the skin and widespread vascular dilatation; (b) tachycardia; (c) bradycardia. (2) Respiratory: For the most part subjective—a feeling of dyspnoea and paroxysmal cough. (3) Central nervous symptoms: Seldom met with and may take the form of loss of consciousness, immediate or deferred. In one case transient hemiplegia occurred. (4) Vomiting. (5) Diarrhoea. (6) Rashes: (a) Erythema; (b) urticaria; (c) herpes. One case developed acute exfoliative dermatitis five days after his last injection. (7) Rigors: From two to six hours after injection and lasting about twelve hours. (8) Albuminuria: Appears in a few cases during and directly after treatment, but passes away when treatment ceases. In some cases albumin in the urine before starting treatment was observed to disappear after one or two injections.

Local reactions are due in nearly all cases to faulty technique. They include local bruising, hæmatoma, lymphangitis, abscess formation, necrosis, and thrombosis.
S. E. D.

THE TREATMENT BY SPLENECTOMY OF SPLENOMEGALY WITH ANÆMIA ASSOCIATED WITH SYPHILIS. H. Z. GUFFIN, M.D. (*Amer. Journ. Med. Sci.*, 1916, vol. clii, p. 5.)

THE author calls attention to the possible relationship of certain cases of splenic anæmia to syphilis, and appeals for a careful record of cases of splenomegaly in which evidence of syphilis is present. He then records three cases of marked secondary anæmia associated with splenomegaly in which the Wassermann reaction was completely positive, and which improved very considerably after splenectomy, although they had all failed to respond to antisypilitic remedies. He also records three other cases from the literature.
A. M. H. G.

THE WASSERMANN REACTION IN PREGNANCY. A. M. Judd, M.D. (*Amer. Journ. Med. Sci.*, 1916, vol. cli, p. 836.)

THE author has done a large number of Wassermann tests in late pregnancy, and out of 892 examinations finds 71 which gave a positive reaction, or 7·9 per cent. The majority of patients giving a positive reaction showed no visible lesions, and this fact encourages the author to urge strongly a routine blood examination of all pregnant women. Blood obtained from the umbilical cord of 277 newly born living infants was also tested with 12 positive reactions, or 4·3 per cent. The author does not show the relation of the infantile to the

maternal reactions, but describes one case in which an infant, who gave a negative reaction at birth, afterwards developed marasmus and gave strongly positive reactions in the blood and spinal fluid. He also points out that in treated mothers infants often give a negative reaction, but the syphilis in these infants may only be latent.

A. M. H. G.

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REVIEWS.

AN INTRODUCTION TO DERMATOLOGY.*

ONE of the most readable of the smaller works on diseases of the skin. Dr. Norman Walker's "Introduction to Dermatology," has now reached its seventeenth year and sixth edition. It has gained somewhat in bulk without changing any of its attractive features. The present edition has been further embellished by additional coloured plates from the life-like wax models by Dr. Cranston Low. The book, it is stated, has been remodelled, but the remodelling seems to consist mainly in a rearrangement of the text necessitated by the "attempt to jettison eczema." The author feels that "eczema is a name which is a cloak for ignorance," and "that by using in its stead the word *dermatitis* (without any adjective), we admit our ignorance and constantly remind ourselves of the necessity of searching out the cause of the inflammation."

The original descriptions of "lesional varieties of eczema" thus become "types of dermatitis"; "regional varieties of eczema" becomes "the commoner forms of dermatitis"; and even the illustration, fig. 21, which for sixteen years has represented the histology of eczema, now bears the common appellation—dermatitis.

In a breezy section on *Dermatitis venenata* there is impressed on the student the importance of being on the alert for idiosyncrasy to certain plant poisons,

* *An Introduction to Dermatology*. By NORMAN WALKER, M.D., F.R.C.P., with the assistance of R. CRANSTON LOW, M.B., F.R.C.P. Sixth edition. With 63 coloured plates and 89 illustrations. Edinburgh and London: William Green & Son, Limited, 1916. 15s. net.

drugs, and chemicals, and to soap or other toilet preparations, as an explanation of a dermatitis which might be otherwise called "eczema," and which disappears as soon as the irritant is avoided. All trade or occupation "eczemas" are brought into the same group of "Dermatitis venenata," and if such eruptions continue (as they frequently do) after the irritant has been removed, it is assumed that their continuance is due to a secondary microbial infection. No corner is left by this sweeping reform in which even a small section of dermatitis may hide under the name of eczema. It will be certainly agreed that eczema is a term of which the use should be restricted, but there are probably many who will continue to employ it for a particular type of vesicular eruption, of amicrobial origin, and, for them, distinguishable by characters of its own from dermatitis due to definite irritants, from acute and chronic streptococcal and staphylococcal eruptions, from eczematoid ringworms and from lichenification of Vidal, and who will feel that it were better to trim down the cloak of ignorance, as represented by eczema, than to substitute for it the much larger mantle of dermatitis. One important example of what many would still like to call eczema—perhaps the purest example—"infantile eczema," is not even mentioned by Dr. Walker, and doubtless, too, for him, loses its identity in the name "dermatitis."

Eczema is not the only disease which is threatened with loss of its identity. Psoriasis is regarded merely as an extremely dry form of seborrhœic dermatitis, and it is described separately only in deference to custom. Since "seborrhœa and psoriasis are practically one and indivisible," psoriasis is due presumably to the same micro-organisms—"the white coccus, Malassez's spores, and the bacillus of seborrhœa"; which is contrary to the general experience that, in contrast with the lesions of seborrhœic dermatitis, those of psoriasis are peculiarly free from micro-organisms. Psoriasis remains, for many observers, an entity, and differs from seborrhœic dermatitis in every respect except that of scalliness.

Following the sections on seborrhœa and psoriasis is a very clear and concise account of Pityriasis rosea, which, with the excellent coloured plate, should help to make familiar this common but insufficiently known complaint, trivial in itself, but important, because, as Dr. Walker insists, it is generally mistaken for an eruption of secondary syphilis. Equally instructive is the section on Acne vulgaris, with its detailed directions for treatment of this obstinate complaint, though it may be remarked that the depilatory effects of X-ray treatment which are said to hamper their utility may be easily avoided by regulation of the dose, and by the simple expedient of protecting the scalp, eyebrows and eyelashes.

The difficult and complicated subject of ringworm is handled with masterly terseness, but not sufficient attention is given to ringworms of the extremities. There is no mention of interdigital ringworms and only a vague account of palmar and plantar ringworms. Ringworm of the nails, which the author formerly looked upon as astonishingly rare, is now recognised as a comparatively common complaint, and an original method of treating this very obstinate affection is recommended. It consists in soaking the nail in Fehling's solution, applied on lint under a finger-stall, after the surrounding skin has been covered with zinc oxide plaster. The nail softens and can be removed after twenty-four hours.

Of Lichen planus the startling statement is made that "it will probably before long find its resting-place alongside of the infective granulomata, and investi-

gators would do well to search for an organism analogous to the spirochæta of syphilis"; while "the recent observation that lichen, like syphilis, yields to '606,' is extremely interesting, and surely supports the suggestion that the organisms of the two diseases are similar."

The roseola of syphilis is said sometimes closely to imitate Erythema multiforme, and that, very exceptionally, small bullæ may develop, but on referring to the account of Erythema multiforme, it is found that this name is not, as is usual, restricted to the description described by Hebra, and which has its characteristic distribution on the extremities.

The chapters on Lupus vulgaris and Rodent ulcer are noteworthy for their insistence on the need for early recognition of these affections, and are already known to the specialist for their valuable instruction in the art of treating these complaints with caustic applications. Under tuberculous affections of the skin both Bazin's disease and Lichen scrofulosorum are described, but Acne scrofulosorum (acnitis, folliculitis) is not mentioned, and the term "tuberculide" is not used.

Squamous-cell epithelioma, occurring upon a basis of Dermatitis solaris or Keratosis senilis, a type of malignant epithelioma the early recognition of which is as important as that of Ulcus rodens, receives no attention.

Among many valuable hints on treatment are those on the use of oxidised pyrogallie acid in Lupus erythematosus, the effect of fortnightly applications of CO₂ snow on the same complaint—as marked as that of mercury and iodide of potassium in syphilis,—of lactic acid in Alopecia areata, and of trichloroacetic acid in Xanthoma palpebrarum. The unusual opinions are expressed that Adenoma sebaceum is really a lymphangioma, that Epidermolysis bullosa is a form of urticaria, that Urticaria pigmentosa is a new growth. There is a new coloured plate of Xeroderma pigmentosum, but no mention is made of radium applications as the best of all treatments for the warty growths in these cases.

Although in just a few instances the views expressed by Dr. Norman Walker differ from the more generally accepted teaching, his book will maintain the position it has always held and deserved of one that may be recommended to students as a lucid and concise introduction to a subject which is often regarded by them as a domain of bewilderment.

H. G. A.

THE TREATMENT OF DISEASES OF THE SKIN.*

As this book has so quickly reached its second edition, we must conclude that it has already made an effective appeal to the medical profession, and on this we congratulate its author. At the same time we cannot help feeling that the book is hopelessly unscientific and lacks a sense of proportion. This latter point is exemplified in the first part of the book which deals with "Methods of Treatment." Here we have no mention of the commoner methods of treatment employed in dermatology, by which the vast majority of cases can be cured, such, for example, as the use of baths, lotions, etc., in acute inflammations or of local antiseptics in parasitic infections, but the "Methods of Treatment" are confined to those which mostly require elaborate apparatus and which, though they have their

* *The Treatment of Diseases of the Skin.* By W. KNOWSLEY SIBLEY, M.A., M.D., M.R.C.P. London: Edward Arnold, 1916. Second Edition.

uses, are far less frequently required; as an example, we find twenty pages devoted to treatment by the production of local and general hyperæmia.

Although this is not carried to such an extreme in the second part of the book, which deals with most of the common and many of the rarer skin diseases in alphabetical order, yet the illustrations accompanying the text show the same tendency, for not one of the sixteen plates shows the result of treatment by simple methods, and especially in Plates VI, XI, and XIII we are shown the results of X-rays and vaccine treatment in cases which would almost certainly have responded more quickly to simple ointment treatment.

The scientific value of the work may be judged by a few quotations from the book. We are told for instance, that "Electrolysis may be defined as the chemical action of the constant current in electro-conducting liquids such as the tissues of the human body. If both poles of a galvanic current are connected with needles, and these are inserted into the skin, as soon as the current is turned on, oxygen, which condenses partly to ozone and hydrogen-super-oxide, is generated at the positive, and nitrogen at the negative pole. Acids are also generated at the positive and alkalis at the negative pole." We are informed that "the skin is purely an excretory organ, and has not any power of absorption," and in order to explain how a patient becomes mercurialised after mercury inunctions we are told that "Mercury is very easily volatilisable, and it is more than probable that during the process of inunction the patient is surrounded by an atmosphere impregnated with mercurial vapour, and that absorption actually takes place through the respiratory apparatus, and not through the skin; if any absorption actually does take place through the skin, it must be by a process of cataphoresis due to a weak electric current produced by the process of friction necessary for the treatment by inunction." But in a later chapter dealing with the advantages of the Dowsing radiant heat-bath, we are told that "in the case of syphilis, a free perspiration is produced, which improves the nutrition of the skin, after which mercury ointment can be rubbed in or a mercurial vapour bath can be administered."

Dealing with vaccine treatment, we learn that "opsonins" is the name given to certain chemical substances in the blood which have the power of destroying bacteria;" and in another place we hear of "an increased diapedesis through the dilated blood-vessels, not only of the blood serum but also of the blood corpuscles."

After a perusal of these and other passages we are quite prepared to believe that the treatments given are "possibly in some cases a little in advance of many of the generally accepted principles of the present school of dermatology in this country."

The book is well printed and produced, and the plates are good, but the few illustrations in the text are not a success.

WHEN TO ADVISE OPERATION IN GENERAL PRACTICE.*

THE title of the book explains its scope. It deals with all the commoner diseases which are likely to require surgical aid, and we feel sure will be welcomed

* *When to Advise Operation in General Practice.* By A. RENDLE SHORT, M.D., B.S., B.Sc., F.R.C.S. Bristol: John Wright & Sons, Ltd., 1916. 5s. nett.

by a large number of general practitioners as a ready help in time of need. The book is written in an extremely lucid style, and is sufficiently dogmatic to be really helpful.

It would be impertinent for us to criticise the surgical advice given, but in two places, where the realm of dermatology touches that of surgery, we would offer the author a humble suggestion; it is that, before removing the anal mucosa for pruritus ani or excising a wart from the sole of the foot, he should try the effect of an exposure to the X-rays.

MESSRS. CHARLES MIDGLEY, LTD., of Manchester, have issued a small Brochure on Medicated Soaps, which they will be pleased to send to any medical practitioner interested. We welcome this handy little publication and hope that dermatologists will find it a more than sufficient substitute for those of alien enemy origin. England has always been famous for her soaps, and Messrs. Midgley have done much to enhance our country's reputation.

BOOKS RECEIVED.

The Circulation of Mercury in the Body. Quantitative examinations based on a new analytical method with special regard to the secretion through the kidneys and alimentary canal, with some common preparations for the treatment of syphilis. By SVEND LOMHOLT. Copenhagen, 1916.

El frío en dermatología—Aire líquido—Nieve carbónica. By Dr. JOAQUÍN CERVERA. Buenos Aires: COMPANHIA SUD-AMERICANA DE BILLETES DE BANCO, 1916.

Granuloma Venéreo. By Dr. H. C. DE SOUZA ARANJO. Pp. 227; 7 coloured plates and 40 figures in text. Rio de Janeiro: COMPANHIA LITHOGRAPHICA FERREIRA PINTO, 1917.

Syphilis. By LOYD THOMPSON, Ph.B., M.D. Pp. 415; 7 plates and 77 engravings. Philadelphia and New York: LEA & FEBIGER, 1916. Price \$4.25.

La Syphilis et l'Armée. Collection Horizon. By G. THIBIERGE. Pp. 196. Paris: MASSON ET C^{ie}, 1917. Price fr. 4.

THE BRITISH JOURNAL OF DERMATOLOGY AND SYPHILIS.

APRIL—JUNE, 1917.

A CASE OF MULTIPLE ULCERATING BASAL-CELL EPI- THELIOMA WITH ZONIFORM DISTRIBUTION AND POSSIBLY OF SWEAT-GLAND ORIGIN.

By H. G. ADAMSON, M.D., F.R.C.P.

THE case described below is in many respects unique. Clinically the growths resembled *ulcus rodens*; histologically they were undoubtedly basal-cell epitheliomata; but their zoniform distribution on the side of the abdomen is unusual, and a noteworthy feature is that the growths appeared to take origin from sweat-ducts and glands.

A. K—, aged 72 years, came to the hospital in March, 1916, for treatment of a "sore" on the abdomen. The sore was an irregularly shaped disc-like patch of about three-quarters of an inch in diameter and raised about one-eighth of an inch. It had an ulcerated crusted centre with a narrow rounded nodular margin. It was situated three inches above and to the left of the umbilicus. There were two or three small contingent nodules. The "sore" had been forming during the past four years.

It was diagnosed as a rodent ulcer and a massive dose of X-rays was given, after which it healed with a smooth flat scar.

In August, 1916, the patient returned and fresh nodules were seen at the margin of the scar and also extending upwards and backwards for several inches from the site of the original nodules.

The nodules now occupied an area six inches long by two inches wide which extended upwards and backwards across the left side of the

abdomen towards the costal margin (Fig. 1). In this area there were some thirty-six nodules, which varied in size from a few lines to an inch across. Some of the nodules were isolated, others were grouped or coalescent. All nodules were raised not more than one-sixteenth to one-eighth of an inch, smooth, firm, and of the colour of the skin. The larger nodules were ulcerated and thinly crusted at their central parts, with a narrow nodular margin suggestive of the "rolled-edge" of rodent ulcer.

Histopathology.—A small nodule was excised. Microscopical sections show appearances which suggest those of rodent ulcer. The growth is a basal-cell epithelioma, although the cell-masses have not the filiform lobulated aspect of a typical rodent ulcer, but form irregularly oval elongated patches arranged in strata with their long axes parallel with the skin surface. Groups of these cell masses are bisected at right angles by a sweat-duct, so that they have the appearance of being threaded on a sweat-duct. In one group (Fig. 2, M.S.D.), the uppermost collection of cells is seen distinctly to arise from the epidermis in the neighbourhood of the mouth of a sweat-duct. It at first proliferates as prickle-cells, but lower in the cell-mass the constituent cells become of basal cell type. All other cell-masses are made up entirely of cells of basal-cell type, bluntly oval, with large nucleus and scanty body and without evident prickles. In another part of the section a sweat-duct can be seen emerging from the deeper part of a cell-mass (Fig. 2); and under a high power it appears as though the cells of growth originated directly from the wall of the duct, though this is difficult to determine definitely (Fig. 3). In the same section, immediately beneath the mass which appears to arise from a sweat-duct there is a sweat-gland which is infiltrated with the cell-growth and here again the growth appears to originate from the epithelium of the sweat-coils (Fig. 2, S.C. 2). For the most part the cell masses show no tendency to duct or coil formation; but in some of the smaller masses the cells are arranged like ill-defined tubules (Fig. 2 B.B.).

This arrangement of the cell-masses (*a*) around the mouth of a sweat-duct; (*b*) around sweat-ducts; (*c*) around a sweat-gland points perhaps to an epithelioma of sudoriparous origin. The grouping of the tumours or nodules recalls that of a linear nævus, and suggests that we have to do with a dormant linear nævus of sweat-gland type



FIG. 1.—Drawing showing the zoniform distribution of the rodent ulcer-like nodules.

TO ILLUSTRATE DR. H. G. ADAMSON'S CASE OF MULTIPLE ULCERATING
BASAL-CELL EPITHELIOMA WITH ZONIFORM DISTRIBUTION
AND POSSIBLY OF SWEAT-GLAND ORIGIN.

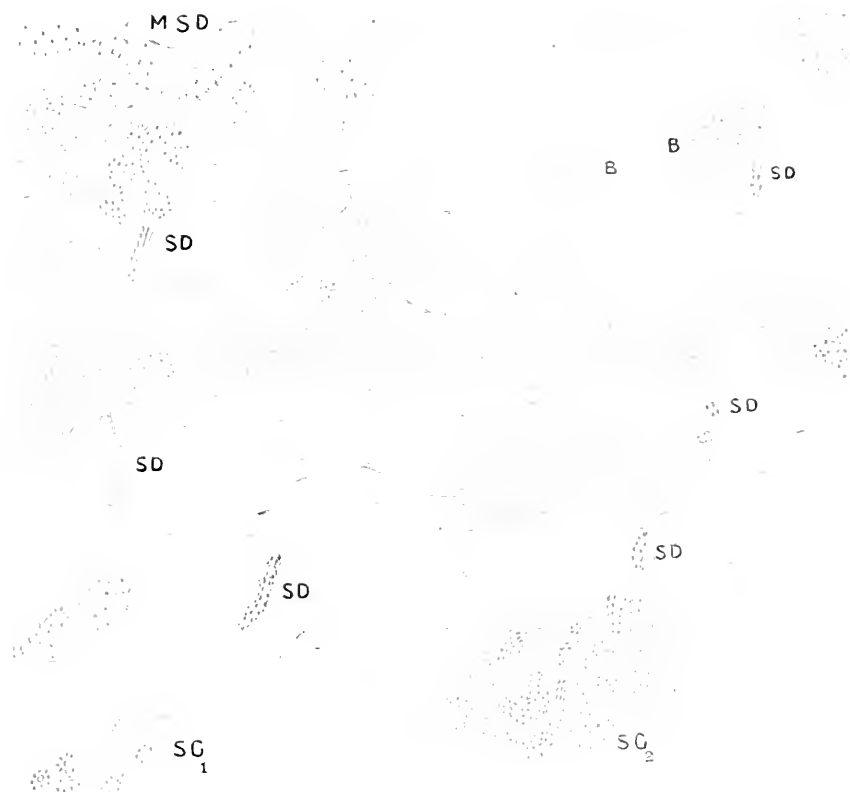


FIG. 2.—Section (under low power) of a small un ulcerated nodule. At M.S.D. is the mouth of a sweat-duct, and at this spot there is proliferation of the epidermal cells, first of prickle-cell type, but lower down passing into the basal-cell type. At S.D., S.D., S.D., are seen sweat-ducts, and the masses of new-growth seem as though threaded along these sweat-ducts. At B, B, the cell-masses show some arrangement as tubules; but the larger masses are made up of closely set oval cells of basal-cell type without any suggestion of tubular arrangement. At S.G.₁ is an apparently normal sweat-gland. At S.G.₂ a cell-mass which appears to take origin from the cells of a sweat-gland.

TO ILLUSTRATE DR. H. G. ADAMSON'S CASE OF MULTIPLE ULCERATING
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FIG. 3. Represents a portion of the section under a high power and shows the apparent origin of the cells of the new-growth from the cells of a sweat-duct.

TO ILLUSTRATE DR. H. G. ADAMSON'S CASE OF MULTIPLE ULCERATING BASAL-CELL EPITHELIOMA WITH ZONIFORM DISTRIBUTION AND POSSIBLY OF SWEAT-GLAND ORIGIN.

aroused late in the patient's life to active growth and giving rise to a basal-cell epithelioma of rodent ulcer type.

The case may be compared with that of Dr. Norman Paul (Syringoma), recently published in the *Journal* * and which forms perhaps a link between the case now exhibited and the linear nevus of syringoma type recorded by Peterson and Elliott.

Subsequent history.—The larger nodules were scraped and cauterised with chloride of zinc under a local anæsthetic, and the area occupied by the scattered smaller nodules was exposed to X-rays filtered through 3 mm. aluminium. After $2\frac{1}{2}$ pastille dose, measured on the distal side of the aluminium screen, the smaller nodules became dried up and converted into crusts and it appeared as though they would disappear entirely. But they have since begun to grow again and fresh nodules have appeared, and it is now proposed to scrape and cauterise all of the nodules under a general anæsthetic.

SOME RECENT EXPERIENCES WITH PURE COAL TAR (PIX CARBONIS PREPARATA, B.P.) AT A BASE HOSPITAL IN FRANCE.

BY CAPTAIN H. C. SEMON, M.D., R.A.M.C..

Physician to Skin Department, Great Northern Central Hospital, N.

THE great value of coal tar in the treatment of diseases of the skin has long been known, and its application as a skin paint in the pure state has received special commendation by French dermatologists, and by Dr. A. Whitfield in England, under whose guidance I first had an opportunity of studying its effects.

For the past three months (December, 1916—March, 1917) a mixture containing pix carbonis B.P., acetone and collodion flexile, equal parts,† has been in constant use, and where applied in the class of case which experience has proved suitable, has been found so successful that I am encouraged to record my results. I venture to hope that they may be found useful by other dermatologists at a time when

* *Brit. Journ. Derm.*, 1916, xxviii, p. 106.

† The combination of coal tar with collodion suggested itself to me as being likely to increase the adhesive character of the former—an anticipation which the facts certainly support.

synthetic drugs and derivatives such as resorcin are at a premium or actually unobtainable.

The above formula, with slight variations in the quantity of acetone, which makes a good diluting medium, was used in every case.

For some time we ran short of B.P. preparation of tar, and while awaiting a fresh consignment, used the ordinary commercial product, after washing it in three changes of water to remove excess of caustic alkali, phenol, cresol and other soluble irritants. Our results did not differ in any material measure from those we obtained before or since, and we have only met with one case in which the application was not tolerated (Case No. 14).

We have applied the paint in various skin conditions, and with very few exceptions the results have been satisfactory, in not a few —brilliant; and when it is remembered that tar is cheap and easily obtainable, that the only apparatus required is an ordinary house-painter's brush, and that dressings are neither necessary nor desirable, it will be conceded that objections on the score of unsightliness and odour are of minor validity. Tar applications are often called dirty, a criticism which the facts do not justify, as the coat, once it has dried on and been dusted with any bland powder, remains fixed and localised for several days. Ether removes all traces both from the skin and clothing in a few minutes.

We are in the habit of applying the remedy ourselves to the lesion, and to that only, and when there is any anticipation of a possible intolerance, the patient is seen daily during the treatment. It is quite remarkable how well the most delicate skin will stand pure tar. Dr. Whitfield has stated* that the acute eczema of infants, so common on the face and head, is markedly relieved and often cured by the undiluted product.

We have found an almost specific tolerance to its effects on the skin of the knee flexures, the elbows, and wrist; and even the scrotum, so notoriously susceptible to local applications of all kinds, is not irritated by an occasional coat of the solution. One of my colleagues, Captain M. Stewart-Smith, R.A.M.C., has been using it recently with success in aural eczema, and I have myself applied it to the neck, forehead, and nasolabial fold without ill result.

* *Syst. of Med.*, Allbutt and Rolleston, vol. ix. p. 326.

In my experience coal tar is the best antipruritic medicament we possess, and in one or two cases under my care it has succeeded in alleviating or curing local itching, which even X rays had failed to relieve. The rapidity with which pruritis is cured is one of the most striking characteristics of the treatment, and where this does not occur within a few hours the case may be regarded as unsuitable, and not likely to benefit from further application.

SOME SKIN AFFECTIONS AMENABLE TO THE TREATMENT.

(1) *Scabies.*

The range of military dermatoses is not a large one, and by far the greater number of our cases are the direct or indirect result of infection with the *Acarus scabiei*. An uncomplicated case of itch is not commonly seen at the base, and the sequelæ which we are called on to treat are (a) sulphur dermatitis, (b) impetigo, (c) furunculosis, (d) lichenisation (Besnier) and (e) vesicular eczema of a relapsing character. (a) The acute stage of sulphur dermatitis is dealt with on general lines of which the outstanding features are emollient baths, calamine lotion, and Lassar's paste. It is as an "end treatment" in these cases that tar has been found invaluable. When the dry stage which tends to remain chronic on the wrists, knee flexures, and elbows has been reached, one or two coats at two or three days' interval have generally sufficed to allay the itching at once, and to restore the normal smoothness to a rough or fissured epidermis in a very short time.

It is also applied in post-scabietic cases for pruritis without objective manifestations—of the wrists, ankles, thighs, penis, and anterior axillary folds—as soon as it is relatively certain that acari no longer exist.

(b) For impetigo tar is absolutely useless.

In two cases in which it was tentatively tried, the black and very adherent crusts which rapidly formed were soon surrounded by a wide inflammatory zone, very sensitive to palpation and obviously secluding pus. When these were fomented or peeled off, the underlying epidermis was found to be superficially ulcerated, and took an excessive time to recover.

It may be stated with emphasis, as has previously been done by

Dr. Whitfield, that tar should never be applied in cases in which even traces of pus are clinically evident. Purulent or semi-purulent discharge is the chief contra-indication to its use, and serious harm in the nature of gland abscess, ecthymatous ulceration, and chronic lymphangitis may be directly caused by an injudicious or careless selection of such cases.

From the foregoing it will be realised that—

(c) Furunculosis is not likely to respond favourably, and, although it has been applied successfully to patches of eczema or dermatitis on areas intervening between crops of boils, its use in this type of case is not advocated.

(d) The lichenification which commonly follows incessant scratching and rubbing of accessible skin areas—such as the popliteal space, the internal and anterior aspects of the thighs, the buttocks, elbows, and wrists—yields at once to its therapeutic action, and any early case (up to six weeks) generally responds favourably in from three to seven days.

(e) With vesicular or papulo-vesicular dermatitis, which is unfortunately an occasional concomitant or sequel to scabies, some surprising results have been obtained (Cases 2, 5, and 9).

In this way local eruptions can be controlled, but it often happens that fresh groups of lesions meanwhile appear elsewhere—on the arms, legs, or buttocks—and much patience, both on the part of the physician and patient, is necessary before the cure is complete.

In these cases, experience has taught us to persist with the applications, and the great majority have ultimately ceased to relapse, and have returned to duty.

It would seem that the longer any single patch remains uncured, the more prolonged the convalescence from what may be regarded as having become a constitutional dyscrasia—the eczema habit.

(2) *Seborrhoea.*

An unusual type of this condition—chronic, intractable, and relapsing—with which we are dealing daily, forms a considerable bulk of our total clinical material.

Whatever its causes—and there are reasons for suspecting that in predisposed individuals, the continuous use of steel helmets, and the impermeable mackintosh linings of the cloth Service caps are in

some degree responsible—the manifestations are, in nearly all cases, the same.

In the acute variety, there is a moist or weeping condition of the scalp, often extremely offensive, with marked impetiginous crust formation, and a tendency to the production of these on the eyebrows, moustache, and beard, and behind the ears. When this has subsided, which it does fairly rapidly under frequent applications of calamine liniment, we usually resort to Lassar's paste, later in combination with ichthyol or salicylic acid (gr. x, ad 5i), zinc and mercury, or weak sulphur ointments. In spite of these, some cases remain uncured, and may be accompanied by an eruption of chronic irritating papules on the central areas of the back and chest, and on the joint flexures.

These latter yield at once to one or two applications of the paint (Cases 11, 12, 15, and 16), and if the scalp condition has been cured, show no tendency to relapse. In many cases, persisting post-aural fissures are troublesome, and Captain Stewart-Smith reports that the application is well tolerated both here and in the concha auris. I have confirmed this observation myself, but would recommend Dr. Whitfield's practice of a preliminary 1-2 per cent. silver nitrate application, in this class of case.

The lichenification of Besnier is an occasional feature in seborrhœa, and here also tar applications have a decided utility.

(3) *Psoriasis*.

The undoubted relationship of psoriasis to seborrhœa (so strongly emphasised by Unna and Norman Walker), and its well-known tolerance of ointments containing tar, led to an *à priori* assumption of the utility of our pigment, and in practice we were not disappointed.

In those chronic types in which thick, silvery scales and apparent infiltration of the skin over the elbows and knees are the chief or only manifestations, a daily coat may be safely applied, and is rapidly effectual.

In one case (No. 21) after four days' painting, although no preliminary scrubbing or removal of scales had been ordered, the whole plaque came away piecemeal, apparently attached to the overlying

tarry coat. The skin beneath showed pink discoloration, but no induration to any marked extent. By no other treatment that I am aware of, could a satisfactory result have been obtained so easily, and in so short a space of time.

Of course the method is not applicable to wide areas covered by large numbers of small hyperæmic lesions. For these, soap, alkaline baths, and chrysarobin ointment remain the most reliable treatment.

(4) *Vesicular Eczema.*

A further discussion under this heading is unnecessary. Our experience tallies exactly with the facts so admirably summarised in Dr. Whitfield's article.

(5) *Lichenification.*

In only one case (with concomitant cutaneous atrophy which had persisted for more than two years, on the anterior aspect of the left thigh, and which was spreading slowly downwards towards the knee), have tar applications failed to relieve the condition.

In this case we have to record failure also with X-rays, ointments of all kinds, scarification, and occlusion under plaster of Paris for a fortnight, and the patient was ultimately sent home to England, uncured.

(6) *Eczema marginatum.*

We have tried the pigment in only one case of this sometimes intractable parasitic infection. It was a case of *Tinea cruris* due to the *Epidermophyton inguinale* of Sabouraud, in which the mycelium was clearly demonstrated microscopically, and which involved the internal aspects of both thighs and the scrotum. Tincture of iodine, applied three times in two days, did not relieve the itching, and, therefore, a tentative coat of the paint was applied to the whole area. The itching ceased within an hour, and the next day we were interested to observe a black ring which exactly corresponded to the original growing edge of the fungus. Two more applications entirely removed the growth, but at the time of writing (ten days later) a recurrence has taken place, and the efficacy of the method is still *sub judice*.

BRIEF NOTES ON ACTUAL CASES.

Scabies.

(1) H. L.— Right elbow itching. A plaque of dermatitis composed of confluent irritable papules the cause. March 6th, 1917, painted; March, 9th, 1917, itching subsided and eruption cured.

(2) D. B.— Deep-seated vesicles on wrists with marked itching, persistent after sulphur treatment, and resisting B. naphthol, Lassar, and other applications. February 24th, 1917, tarred; March 8th, 1917, cured.

(3) W. S.— Irritable papules on legs and buttocks. March 2nd, 1917, tarred; March 6th, 1917, cured.

(4) A. J.— Sulphur dermatitis on thighs. Internal and external surfaces present bright red groups of follicular papules. March 3rd, 1917, tarred; March 7th, 1917, much improved.

(5) J. S.— Vesicular eczema on both wrists after scabies. February 20th, 1917, tarred; February 22nd, 1917, retarred; February 27th, 1917, cured.

(6) Itching papules on arms, and in knee flexures after scabies. March 1st, 1917.; March 4th, 1917, tar applied, and March 8th, 1917, cured.

(7) G. V. M.— Chronic itching back of knees tending towards lichenisation after scabies. March 3rd, 1917, painted; March 6th, 1917, much improved.

(8) F. G. C.— Similar case—on calves of legs.

(9) C. S.— Papules on wrist cured by one application.

(10) W.— Itching scrotal papules after scabies. This intractable condition had failed to respond to Lassar's paste, sulphur ointment, calamine lotion, and weak mercury ointment. It yielded to the first application of tar collodion.

These cases might be multiplied into several hundreds as the preparation is being used every day by at least four medical officers at this hospital.

Seborrhœa.

(11) E. B.— A psoriasiform seborrhœa on legs; scalp affected. February 27th, 1917, legs tarred; March 3rd, 1917, no itching; retarred, March 5th, 1917, well.

(12) J. H.— Seborrhœa capitis with erythematous irritable eruption on forehead. March 1st, 1917, tarred forehead; March 4th, 1917, no pruritus—no erythema.

(13) J. B.— (Captain Stewart-Smith's case). Ears tarred for Eczema seborrhœica of a dry type. Practically cured by two applications.

(14) J. L.— Intensely irritable papular seborrhœa on abdomen and flanks. Tar applied freely, March 3rd, 1917; itching not much improved but eruption clearing, March 6th, 1917; retarred, March 8th, 1917. Marked increase of both eruption and pruritis, with a zone of erythema beyond tar margin. In this case I suspected the tar as causal, and abandoned its use for calamine lotion, under which patient rapidly improved.

N.B.—It would almost appear as if failure to relieve itching in a very short space of time by the use of tar is a direct contra-indication to persistence in its use, and I am now in the habit of inquiring closely as to the subjective sensations at the earliest possible opportunity.

(15) R. B.— A follicular erythematous type on the extensor aspect of arms and forearms, associated with marked seborrhœa of the scalp, and a crusty impetiginised eruption on the face.

The former was painted with the solution on March 2nd, 1917, and when seen again on March 4th, 1917, both papules and itching had subsided, although the condition on the scalp and face persisted for some considerable period. This ultimately yielded to the continuous application of calamine liniment and ung. hydrarg. nit. dil.

(16) F. G. C.— Presented dry seborrhœic patches on his back and face, and fissures behind both ears. He was cured by two applications only.

Seborrhœoids of the geographical psoriasiform, and tinea types are particularly amenable to tar treatment, and, provided that the scalp condition is dealt with at the same time very rapid and permanent disappearance is the rule.

Vesicular Eczema of the Primary and Secondary (e. g. Post-scabietic) Types.

We find ourselves in complete agreement with the statements made by Dr. A. Whitfield in his article on "Eczema" in Allbutt and

Rolleston's *System of Medicine* (pp. 323 *et seq*). Excellent results were obtained in an astonishingly short time in the following cases:

(17) A chronic vesicular recurrent eruption tending to lichenisation in the knee flexures. March 3rd, 1917, tarred; March 6th, 1917, very much better, retarred; March 10th, 1917, cured.

(18) W. R.— Moist eczema of both legs tarred four times with coal tar during a period of ten days, the cure being finally completed by one application of wood tar (*gaudron vegetale*).

(19) Very striking was the case of Private J. S—, who developed a vesicular eczema of the wrists during an attack of scabies, which persisted after this was cured.

On February 20th, 1917, the weeping areas were painted with the solution.

On March 3rd, 1917, after four applications at three and four days' interval, the recovery was perfect.

Eczema marginatum.

(20) J. A.— First treated by the method on February 28th, 1917. As the scrotum was involved, the solution was applied to it also, and, after drying and powdering, contact with the thighs was prevented by a suspensory bandage. The itching subsided at once, and two days later the sole remnant was a complete black circle about two inches in diameter on the internal aspect of the right thigh. It would appear that the vigorously growing edge of the fungus had in some way absorbed or fixed the tar. The application was repeated on March 5th, 1917, and by March 10th, after only two coats, the condition was no longer apparent, and all subjective sensations had disappeared.

The eruption and pruritus reappeared March 20th, 1917, and patient has been on Whitfield's ointment (benzoic acid, gr. xv; salicylic acid, gr. xx; vaseline $\frac{3}{4}$), for five days without improvement. It is proposed to try the tar collodion a second time.

Psoriasis.

A good many cases of the chronic *en plaque* type have been treated in this manner. The most striking result was obtained in the case of—

(21) H—, a private in the A.S.C. He had noticed the eruption of

typical circular scaly plaques on his arms only, for about six weeks. It was his first attack.

On January 14th, 1917, he was first painted. On January 16th, 1917, improvement was marked, and a second coat applied. On January 18th, 1917, all areas had vanished completely, and wood tar was applied as a prophylactic against a too rapid occurrence.

(22) Pte. B— presented chronic, thickened, and scaly plaques on both elbows, and a coat of tar was thickly spread on them on January 15th, 1917.

By January 18th an extraordinary change had taken place. There was no further tendency to the formation of scales, and nothing but a slightly indurated pinkish-violet discoloration remained.

(23) Psoriasis of the face. Pte. H. H— was painted by one of us (S. S—) on March 5th, 1917. After one application, which was tolerated extremely well, the patches all involuted in a satisfactory manner.

CONCLUSIONS.

(1) In tar—pure, or combined with flexile collodion, and with or without acetone—we have at hand a very simple, safe, cheap, and rapid remedy for various dermatoses of a chronic and pruritic type.

(2) No dressings are required—a fact which conduces to the comfort of the patient, and to the saving of labour and expense.

(3) The solution must never be applied to a purulent surface.

(4) The method is very exact, and there is no tendency as with the case of ointments and lotions for tracts of skin surrounding the affected parts to be impregnated with drugs.

I hereby desire to express my thanks to Major H. MacCormac, R.A.M.C., for permission to publish these results from the Division of which he has control, and to Captain M. Stewart-Smith, R.A.M.C., for showing me the results he has obtained by great care and caution in the selection of his cases.

THE ACTION AND RÔLE OF COLLOIDS IN CHEMO-THERAPY.

By J. E. R. McDONAGH, F.R.C.S.

FOR many years our use of drugs has been empirical, that is to say, we have known that such and such a drug will, if prescribed in a certain disease, benefit the patient, but our knowledge of its action, or of its behaviour *in corpore*, has been practically *nil*. The rational employment of drugs may be said to have commenced with the advent of chemo-therapy. By chemo-therapy is meant the administration of synthetic compounds containing several chemical groups, one of which has a selective action for, and a destructive action upon, the cells or parasites attacked. The activity of the destructive chemical group is dependent upon the other chemical groups, which fix themselves on to the cells attacked, and thus act as carriers. Arseno-benzene is the best known chemo-therapeutic product. The arsenic is supposed to attack the *Spirochæta pallida* directly without harming the host's cells, being carried to the organism by the other chemical groups in the compound. We know now that arseno-benzene does not cure syphilis. This may be due to the following causes: (1) that the *Spirochæta pallida* is not the only phase of the causative organism of the disease; (2) that arsenic does not act in the way described. Some two years ago the late Mr. Henry Crookes published (1), (2) some interesting work upon the bactericidal power of elements, and he showed that arsenic, antimony, and mercury were the most powerful, that copper and iron had a feeble action, and that sulphur even stimulated the growth of bacteria.

In this group of elements we see that the three most active metals are three of the most toxic, a fact which throws some doubt upon their being able to destroy parasitic cells without harming those of the host. In spite of the fact that the bactericidal power of arsenic, antimony, and mercury is so great *in vitro*, not one of these elements will cure a bacterial disease. Copper is the strongest fungicide known, but it is practically valueless in a fungous disease. Sulphur is a particularly inert element, yet in certain cases of syphilis its therapeutic action is greater than that of arsenic. From this it follows that the action of the elements *in vivo* is not the same as that

in vitro, and that the parasite attacked is not attacked directly by the element in question. Broadly speaking, the action of the elements is more pronounced in fungous than in bacterial diseases, in protozoal than in fungous diseases, and especially in the protozoal disease syphilis. If the parasite is not attacked directly, then the degree of action of the element in the various diseases must depend upon certain peculiarities of the protective substance, and upon peculiarities which are of a non-specific kind. Therefore, before we can say how this or that drug acts in a special disease, it is necessary to know how the host naturally protects himself.

From my research work (3), (4) into this subject, I believe that the body naturally combats disease by the protein particles in the serum, and in certain cells (plasma cells). These protein particles are colloidal particles, possessing Brownian movement, and they kill the parasites by a chemico-physical surface action, which is dependent upon and regulated by three factors. The first of these, and the one which accounts for specificity, is that the protein particles have a stereo-chemical molecular configuration as nearly as possible homologous to that of the parasitic protein particles, which are also in the colloidal state. The second and third factors are oxidation and reduction. Owing to the fact that the chemical formula of no specific protein is known, it is only possible to help the protective substance with drugs by increasing its powers of oxidation and reduction. Oxidation is induced by certain metallic compounds, and reduction is induced by certain non-metallic compounds. Before a chemo-therapeutic product can act at all, it should be in the colloidal state, in which form it is immediately taken up by the colloidal protein particles in the serum, the activity of which is increased by the drug according to its nature. When arseno-benzene is injected, the colloidal particles are adsorbed by the host's protective substance, the oxidising action of which is enhanced by the arsenic. The action of mercury is similar to that of arsenic, therefore the use of arsenic and mercury in syphilis only fulfils half of the chemo-therapeutic programme, and the continued employment of only oxidising agents is one of the reasons why such severe recurrences, especially in the nervous system (9), are now so frequently seen. It is neither arsenic nor mercury which regulate the oxidation process *in corpore* but iron, therefore the use of the two former must always be fraught with a

certain amount of danger to the host. As iron is the metal which regulates the oxidation process *in corpore*, attempts have been made to manufacture a colloidal compound thereof, and the best compound so far prepared is ferric tri-para-amino sulphonate (ferrivine). As sulphur is the non-metal which regulates the reduction process *in corpore*, a colloidal compound, di-ortho-amino-thio-benzene (intramine), has been prepared, which fulfils the other half of the chemo-therapeutic programme. Iodine has a similar action to sulphur. The reason why the action of chemo-therapeutic products is more pronounced in syphilis than in other diseases is due to the fact that there are more protein particles in the serum in syphilis, hence more of the drug can be adsorbed. The colloids with which I have had the greatest experience are iodine, iron, mercury, silver, and sulphur. I propose now to say a few words about each, and to illustrate their use with cases.

IODINE.

Iodine is supplied as collosol iodine 1 in 500. Colloidal iodine can be taken internally without producing iodism, and with results which surpass those obtainable with any salt or organic preparation of iodine. The dose *per os* is 5ij-5iv *ter in die, post cibos*. Colloidal iodine can be injected intravenously in doses of 100-300 c.cm. without upsetting the patient in any way. Occasionally it causes slight venous thrombosis at the site of injection, but, having given several hundred injections, I have never noticed any harm result therefrom, and in time the vein becomes patent again. An intravenous injection of colloidal iodine enhances the action of a subsequent injection of a metallic compound, because it breaks up the protein colloidal particles, increases the area exposed by them, thereby enabling them to take up more of the metallic drug.

Colloidal iodine increases the action of intramine, because, in the faintly alkaline blood-stream, it re-oxidises the mercaptan, into which the intramine has been reduced, so multiplying its useful action.

Colloidal iodine injected intravenously is indicated in every condition in which the hydrogen ion concentration of the serum is raised—viz. metallic, alcohol, and narcotic poisoning. Colloidal iodine oil, 3 per cent., is in some cases of ringworm of the body more efficacious

than the salicylic and benzoic acid ointment and in some cases of chronic dermatitis it is invaluable.

IRON.

Ferrivine, the name given to ferric tri-para-amino-benzene sulpho-nate or ferric sulphanilate, is injected intravenously in doses of 100–300 c.cm. Ferrivine does not cause venous thrombosis or upset the patient. It has a marked tonic action, and is useful when several injections are being given to a case, since the use of three different oxidising agents has a greater therapeutic action than three injections of any one alone. Ferrivine does not kill the *Spirochata pallida* so quickly as arseno-benzene, but this test is not of much value in estimating the usefulness of a compound, because the cure of syphilis does not depend upon the death of only this phase. Ulcerative chancres, lymphangitis, and lymphadenitis appear to resolve more quickly under ferrivine than under arseno-benzene.

CASE I.—Patient had a chancre in corona, lymphangitis, and lymphadenitis. Foreskin could not be retracted.

April 12th.—Intravenous injection of ferrivine, 100 c.cm. Forty-eight hours later swelling had disappeared.

April 14th.—Intravenous injection of ferrivine, 100 c.cm. Forty-eight hours later foreskin could be retracted, exposing a gangrenous primary sore.

April 16th.—Intravenous injection of ferrivine, 100 c.cm. One week later sore had completely healed, and the lymphangitis and lymphadenitis had vanished.

MERCURY.

Colloidal or collosol mercury may be injected intravenously and intramuscularly. For the former it is put up as a 1 per cent., and for the latter as a 5 per cent. emulsion. The dose, when administered intravenously, ranges from 5–15 c.cm. In rabbits weighing 2 kgm. 3 c.cm. is a lethal dose. Colloidal mercury does not cause venous thrombosis, but, in doses of 15 c.cm. and over, the patient is apt to be troubled with vomiting and diarrhœa for a few hours. The next day there is usually some gingivitis, and the patient may have an attack of herpes oris. Even in these large doses colloidal mercury never produces shock or other toxic effects. Any disturbance of the system caused by colloidal mercury can be instantaneously remedied by colloidal iodine and intramine (5) (6).

CASE 2.—A patient received 10 c.cm. of a 5 per cent. emulsion of colloidal mercury intravenously, with the result that he developed gangrenous stomatitis, hæmorrhagic diarrhœa, and anuria, symptoms which immediately cleared up under one injection each of colloidal iodine and intramine.

Colloidal mercury has an extremely rapid effect in clearing up syphilitic lesions; the injections can be safely repeated, therefore it can be used in conjunction with ferrivine and an arseno-benzene compound as a third oxidising agent, or with ferrivine alone, if arsenic is considered undesirable. Up till now mercury has never been used in a colloidal form, and when administered intramuscularly the usual dose was about 1 gr., and a fraction of that when injected intravenously. In the colloidal form, when a 1 per cent. emulsion is used, 7 c.cm. contain 1 gr. If 2 gr. can be injected intravenously with impunity, it must be apparent to all what a wonderful advance in therapeutics colloids have made; and this is still more the case when I point out that, as regards activity, 1 gr. of mercury in the colloidal state is approximately equivalent to 10 gr. in the non-colloidal state.

Colloidal mercury, as a 5 per cent. emulsion, may be injected intramuscularly, and is superior to grey oil, calomel, etc. As 1 gr. of colloidal mercury is a bigger dose than 1 gr. of non-colloidal mercury, and as it is only necessary to prescribe small doses when mercury is injected once a week intramuscularly, the full dose, 1·4 c.cm., or 25 minims, need not be employed. If eight weekly injections are given, it is best to begin with about 8 minims, and gradually work up to 20 or more according to circumstances.

SILVER.

Colloidal or collosol argentum may be prescribed internally and locally. Internally, in doses of 5j-5iij, *ter in die, post cibos*, it is extremely useful in all cases of intestinal toxæmia, and there is no fear of argyria being produced. Many cases of dermatitis are due to toxines which emanate from the intestine, and in some of these I have seen the rash disappear without employing any local medication. Locally, colloidal silver never produces pigmentation. It is extremely useful as a gargle and as a douche in nasal catarrh, etc. As a suppository colloidal silver is invaluable in *Pruritus ani*, hæmorrhoids, prostate and bladder trouble. As a dressing for wounds it is non-irritating,

and superior to most antiseptics in use. The best results I have seen obtained with colloidal silver have been in cases of chilblains and trench feet.

CASE 3.—A man, aged 35 years, had extremely bad chilblains on the hands, feet, and ears. Prior to the winter of 1915-16 he had never suffered from them. The chilblains began November, 1915, and persisted till March, 1916, in spite of the different remedies which had been used. They made no sign of fading until collosol argentum (1 in 2000) was rubbed into them. The application caused an immediate and temporary aggravation, but within twenty-four hours all the chilblains had disappeared.

When colloidal silver is used locally, either as a wound dressing or for chilblains, etc., it is wise to alternate each application with colloidal iodine, in order to obtain a combined oxidation and reduction action. When these two colloids are thus employed, wounds certainly heal more quickly than they do with one alone.

SULPHUR.

There are two colloidal sulphur preparations, one a simple colloid known as collosol sulphur, the other a complex colloid known as di-ortho-amino-thio-benzene, or intramine.

Colloidal sulphur as a local application is sometimes useful in seborrhœa, scabies, etc., but such uniform results are not obtained as with sulphurous acid and unguentum sulphuris. In my hands colloidal sulphur has proved most useful in a bath in cases of rheumatism, fibrositis, arthritis, etc. Most people can take three baths a week, but if this number is exceeded the patient may develop a sulphur dermatitis.

Intramine is one of the most perfect colloids and reducing agents in therapeutic use. It may be taken internally, injected intramuscularly or intravenously, and applied locally. For internal medication it is put up in këratinised capsules, three to six of which may be taken daily. Being a powerful bactericide, it is extremely useful in intestinal intoxication.

CASE 4.—A girl, aged 26 years, had had bad *Hydroa aestivale* for ten years. The eruption affected mainly the face and hands, but in some seasons it appeared on the trunk as well. The rash usually made its appearance about April, and remained till October; occasionally it persisted in a milder form throughout the winter. Under intramine internally and some mild application locally the patient was free for the summer of 1916, and this year, up to the present, it has not reappeared.

For intramuscular administration intramine is put up in 5 c.cm. ampoules, 2.5 c.cm. of which should be injected into each buttock. Like other colloids, intramine injected intramuscularly is apt to cause pain.

For intravenous use intramine is supplied as a 0.1 per cent. emulsion ready for injecting. The dose ranges from 20–100 c.cm. Intramine may be injected intravenously into out-patients, and it does not cause venous thrombosis, or upset the patient in any way. It is best to filter the emulsion through a very thin layer of wool and to neutralise it with sodium hydrate before it is injected, as otherwise the patient will have a fit of coughing before the injection is finished. Intramine is absolutely non-toxic, and almost any dose may be given—indeed, it is impossible to find the lethal dose for rabbits, in spite of the fact that it is probably the most powerful chemo-therapeutic product known. Intramine is extremely useful in the chronic stages of all diseases, when it should precede oxidising agents. In the early stages of syphilis it should succeed oxidising agents.

CASE 5.—Patient had had two attacks of gonococcal epididymitis, which, on resolution, had left hard lumps in the lower poles. Some weeks before I saw the patient both his testicles had swollen for the third time. After intravenous injections of colloidal iodine (1), intramine (2), and colloidal mercury (1), given in one week, both testicles diminished to a size they had not reached prior to the first attack, and the hard, infiltrated lumps could scarcely be felt.

CASE 6.—Patient had gonococcal osteo-arthritis of the right shoulder-joint. Movements very restricted, in spite of massage, electric baths, etc., for six months. After the same treatment as prescribed in preceding case the patient regained his full movements.

CASE 7.—Patient with chronic dermatitis, resembling *Mycosis fungoides*, of five years' duration. Under one injection of colloidal iodine, two of intramine, and one of galy, with no local application except toilet lanoline, the dermatitis completely vanished.

CASE 8.—Patient had had an *Ulcus molle serpiginosum* for several years, and it had proved intractable to every kind of treatment. Within a week after one injection of colloidal iodine and two of intramine had been given, the ulceration completely healed. In this case intramine was also applied locally.

When intramine is used as a local application caution must be exercised, as with scarlet red, because it is apt to set up a dermatitis. In some cases of chronic gonorrhœa intramine may be painlessly injected into the urethra with benefit, but care must be taken to prevent any from getting on to the skin of the penis or on to the scrotum.

It is not necessary to describe cases of syphilis and tuberculosis which have been treated with intramine, because many have already been cited in this Journal (7) and elsewhere (8). Intramine is a specific for mercurialism, plumbism, and arsenical poisoning, in fact, it is indicated in all conditions in which the hydrogen ion concentration of the serum is raised.

CASE 9.—A woman was treated for cerebro-spinal syphilis with galy and mercury. The last injection of galy gave rise to an arsenical dermatitis, which persisted for nine months, when the symptoms of cerebro-spinal meningitis reappeared. Within a few days of giving the patient one injection of colloidal iodine and one of intramine the rash disappeared.

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TREATMENT OF SCABIES BY SULPHUR FUMIGATION.*

By LIEUT.-COL. JOHN BRUCE, R.A.M.C.(T.F.).

I was called upon to treat a considerable number of cases of scabies in June, 1915. The old treatment by sulphur ointment and sulphur lotion failed to cope with the rush of cases, and I commenced to experiment with sulphur dioxide gas. The results exceeded my expectations. At first the cases were kept under observation for ten days after treatment, but as confidence in the new method became established, the period of detention was gradually shortened until I felt justified in returning patients to their units in a few hours after exposure to the vapour.

* Read at a meeting of the Royal Society of Medicine, Section of Dermatology, on February 15th, 1917.

The cabinets were made of tongued and grooved wood on the lines of a Turkish bath cabinet, and were constructed to hold two patients. The size was as follows: Front, 4 ft. 7 in. by 4 ft. 2 in.; sides, 4 ft. 2 in. by 3 ft. 7 in.; back, 5 ft. 3 in. As it was necessary for the cabinet to be used out of doors, I found a canopy 2 ft. high, covered with canvas, a useful addition. It afforded protection to the patients from sun and rain. The roof, which slopes towards the front, is provided with movable outer portions which are adjusted after the patients are placed in position. The apertures for the neck are small, about 5 in. in diameter. As the wood is soon warped by the heat and exposure to the sun, it is necessary to cover the inside of the cabinet with thick brown paper, and to see that all the joints fit closely. A little felt or rubber may be fastened to the sides of the doors and to the sliding panels to ensure a close joint. The doors may be in front or in the sides. In the latter case the sliding panel can be fastened to the top of the door.

One long seat at the back, made of narrow rails, or two side seats, also made of laths, can be used; or a round seat with a large hole in it may be tried. The bottom of a cane chair could also be used. An ordinary solid seat would not allow the buttocks to come in contact with the fumes.

Sulphur may be used either in the form of candles or lump sulphur. If the latter is used, a little methylated spirit must be sprinkled over it. I do not recommend this, as it is impossible to control the rate of burning. I get the best results from the large sulphur candles supplied by Jeyes. These burn slowly, last for five hours, and each candle is sufficient for the treatment of ten patients.

Sulphur vapour acts more powerfully in the presence of moisture. A small basin or tray may be placed over the candle on a tripod so that a little watery vapour is given off at the same time. Steam may be allowed to pass into the cabinet from a portable disinfecter or a steam generator. It is necessary to keep the patient warm during the time he is inside the cabinet, so as to encourage sweating, and in cold weather I have occasionally placed a small paraffin stove in the box so as to warm it up before putting the patient inside. The temperature inside the cabinet should be kept at 100° to 106° F. The candle is sufficient to keep it at this point if the cabinet is previously warmed.

The duration of exposure to sulphur vapour should be from forty to fifty minutes. Anything longer than this tends to set up dermatitis, especially about the buttocks.

The following is the method of procedure I adopt: The patient is given a hot bath, allowed to soak for at least five minutes in the water, well lathered with soap, either soft soap or yellow bar, and the skin scrubbed to open the burrows. He is then transferred to the warm cabinet, placed on the seat with the head protruding through the aperture in the roof, and the sliding portion adjusted. A warm wet towel is applied round the neck to prevent the escape of fumes, and a sulphur candle placed inside the cabinet, lit, and the doors closed. An orderly must remain in constant attendance, with instructions to remove the patient at once should he show signs of faintness or difficulty in breathing. At the end of forty to fifty minutes the lid is quickly removed, and the patient returns to the bath-room, where he puts on clean warm clothing.

It is necessary to send with the patient all his kit, every article of clothing he possesses (not omitting those at the wash), his blankets, his paillasse and pillow. If a Thresh or steam disinfecter be available, all suitable articles can be treated by steam. I used a field portable disinfecter for several months, and found it efficient. If neither of the above is available it would not be difficult to construct an air-tight box or chamber and have steam let into it by a flexible metal pipe from a boiler or oil-drum. The clothes can also be disinfected in the cabinet, and when only one case is being treated, I generally hang his clothes at the same time in the spare part of the box. Boots and other leather articles can be treated by formalin spray, or in the cabinet.

The treatment must be supervised carefully, and not left entirely to the orderlies. It is important to see that the cabinet is warm, and that it contains water vapour. Quick burning candles should not be used, as they produce irritating fumes. The cubic capacity of the box is only 78 ft. No antiseptic, such as Jeyes' fluid or lysol, should be added to the bath as it may produce irritation of the skin.

The best results are obtained in recent cases with little induration, and one application will invariably cure these cases. One application will cure most of the old-standing cases, but to be on the safe side when there is much induration, I give a second application

at the end of forty-eight hours. The relief from itching and irritation is immediate, and a patient who has not had a comfortable night's sleep for weeks will sleep the whole night without scratching. Dermatitis has been infrequent, and is easily treated by a simple zinc ointment. A slight general branny desquamation often takes place about forty-eight hours after the treatment. I have treated about 200 cases, and have had 2 per cent. of returns, but in each of these cases I feel certain that some article of clothing had escaped disinfection and thus reinfected the patient. I have received many encouraging reports regarding the efficacy of the treatment from various Home Stations and from France.

The treatment is rapid, certain, and cheap. One candle treats ten cases. If suitable arrangements can be made for the disinfection of the clothing at the same time as the treatment of the patient is being carried out, cases can be returned cured to their units on the day of admission. For example, twenty patients turned up one morning at 9 a.m., were all treated in one double box, their clothing disinfected, and all returned to their units the same evening, and none of these cases returned for further treatment. The treatment, if carefully carried out, should not be in any way disagreeable to the patient.

(The discussion was preceded by a demonstration of the cabinet, and of the portable disinfector above described.)

DISCUSSION.

Dr. BUNCH: We are, of course, deeply interested in this apparatus and demonstration, but I do not think Colonel Bruce can claim any great novelty for it. I am attached to a hospital in which we have had a precisely similar apparatus in use for some years past. I asked the secretary how long it had been in use there, and he replied, "Forty years," and one of the servants there had personal knowledge of it for twenty-five years, and the nurses in attendance have given many hundreds of such baths to soldiers and civilians. We know it is a successful treatment, and, as the exhibitor says, some of the patients ask for more. I know of a patient who, without the knowledge of the R.A.M.C. officer who sent him, recently induced the attendant to give him as many as seven baths, because he felt so much benefit from the first bath or two. That man came to me with such a severe sulphur dermatitis that it is doubtful if he will be able to go to France this week.

Dr. H. G. ADAMSON: I was interested in Colonel Bruce's experiences with the sulphur fumigations, because about two years ago I had occasion to make trial of this method in a case of psoriasis, and on looking up the literature I could

find nothing later than the early nineteenth century. It appears to have been employed extensively in Paris and in Vienna at that period, and it is curious that it should have ceased to be used, and only revived after one hundred years. Hebra says that "sulphur fumigations" were used so far back as the seventeenth century by Glauber, and afterwards by Lalouette in 1776, and by Galès in 1816. In 1816 Galès published a small book, *Mémoire et rapports sur les fumigations sulfureuses appliquées au traitement des affections cutanées et de plusieurs autres maladies*, a copy of which I was able to find in the library of the Royal College of Physicians. As a result of his experiences of this method, and his recommendation of its employment on the score of efficiency and cheapness, the council of administration of the hospitals of Paris appointed a committee to watch cases under treatment, with the result that this committee advised the Government to establish at the Hôpital St. Louis a department for the treatment of scabies by sulphur fumigations. Galès' book, with details of the treatment and illustrative cases, was published by order of the Government and dedicated to the Duc de Richelieu. Galès received a pension for life of 6000 francs. How long this department existed I am unable to say, but Galès' success seemed to have prompted others to use sulphur fumigations for scabies and other skin-eruptions, and it was employed in Dublin by Wm. Wallace, who also wrote a book, *Observations on Sulphureous Fumigations*, 1820, and by Sir Anthony Clarke, also of Dublin, who also wrote a book, *An Essay on Diseases of the Skin, containing Practical Observations on Sulphureous Fumigations in the Cure of Cutaneous Complaints*, which he dedicated to George the Fourth. Sir Anthony Clarke's book is in the library of the Royal Society of Medicine. Hebra tells us that de Caro introduced the treatment into Vienna in 1819, and that afterwards a trial was made in the General Hospital of Vienna, the boxes invented by Galès being used, but that the results obtained were not such as to lead to the further adoption of the method, for it was found to set up artificial eczematous eruptions, which so greatly prolonged the treatment that the average duration exceeded four weeks. Galès, in summarising his experiences, says that the number of treatments for scabies is from four to twenty, though most cases can be considered cured after the seventh fumigation, and that from seven to fourteen days suffices for the cure. The duration of the fumigations was half-an-hour, and one or more were given daily. It does not seem, therefore, that Galès' treatment was a particularly rapid one, since we know that we can cure scabies in three days with baths, soft soap, and ung. sulphuris. Galès, in his dedication to the Duc de Richelieu, speaks of designs of the apparatus, but these are not reproduced in the book. Neither does he give any description of the apparatus which he had constructed, "des boîtes fumigatoires ou baignoires d'une forme particulière." It is interesting and important at the present time to learn from Colonel Bruce that he is able to cure his cases of scabies by one "fumigation." Possibly the difference between his results and those recorded by Galès and by Hebra may be due to the fact that he prescribes a bath, with soft soap, before the fumigation.

Captain GRIFFITHS: At the present time scabies is a most important disease, and I trust the Section will discuss the matter pretty fully, for if the experienced dermatologists here can give guidance as to the best way of treating this disease, they will thereby be doing an important national service, on account of the very large number of soldiers who are suffering from scabies. As previous speakers

have said, this method is not new ; still, it is not widely enough known, and needs to be better known. It has been in use for many years in the hospital to which I am attached, and in the Army it is very much a question as to which is the method which will enable the largest number of men to be treated in the shortest time, because the patients have to be kept as in-patients until they are well. I should like to know how many can be treated in one day by this apparatus. [Colonel BRUCE: With two boxes, fifty cases in twelve hours.] It is very convenient indeed for treating twenty cases or so in a day, but if it is a matter of treating hundreds, unless one has an unlimited supply of these boxes, the most convenient means is the old-fashioned one of giving baths and using sulphur ointment for three days. I have seen many cases treated in the Army, and I think the commonest fault is that they are treated too much, so that the complication of dermatitis is, on the whole, fairly frequent.

Major GRAY: One important point which has been brought out to-day is that, in Colonel Bruce's experience, a cure can be brought about by this method by a single exposure to sulphur vapour. There are many methods by which sulphur can be applied to the body—and other drugs too—and by which cure results from a single application. But there is one cardinal point in connection with that cure, and that is, that the whole of the patient's belongings must be sterilised at the same time. Most patients who are treated by sulphur vapour, in civil life, go home and lie on an infected bed, and in a week's time or so require further treatment. But in the Army, when the soldier can put all his belongings in a bag, and these can be sterilised while he is undergoing the treatment, there is no reason why the vapour treatment should not be satisfactory. To apply it satisfactorily in civil practice, except in workhouses, and so on, would be a matter of considerable difficulty. Therefore it is better that these patients should be treated with an application which can be smeared on the body, and so be kept in contact with the wearing apparel and the bed-clothes, so that the *acarus* will be killed not only on the body, but also in the objects which come in contact with it.

Dr. J. H. SEQUEIRA: It is scarcely relevant to Colonel Bruce's paper, but I may tell Major Gray that I have an arrangement with the local authorities in my district by which I notify to the medical officer of health all cases of scabies, and he sees that the patient's home and clothing and other belongings are disinfected.

The PRESIDENT: I think it will interest the Section, and especially Colonel Bruce, if I read a letter on the subject which I have received from Major MacCormac, who has had considerable experience of this subject with troops in France:

" February 9th, 1917.

"I have now had the opportunity of seeing a number of patients who have undergone the treatment, and I cannot say I have been favourably impressed by it.

"It seems to me that in the cure of scabies three things should be attempted—the opening of burrows, the destruction of the parasite *without producing dermatitis*, and the disinfection of clothing and bedding to prevent reinfection. The vapour from burning sulphur will no doubt destroy insects wandering on the surface of the body ; but that it can penetrate into the burrows and there kill the female and her ova seems to me unlikely, unless it be pushed to the extent of

causing severe dermatitis; certainly among the vapour-treated cases which I have seen, active scabies was often still present. Some had both scabies and dermatitis; others dermatitis alone.

"The method is by no means new. Hebra writes as follows: * The so-called sulphur fumigations afford the best example of the employment of remedies in the form of vapour in the treatment of scabies. So far back as the seventeenth century these were tried by Glauber, and subsequently they were recommended in 1776 by Lalouette, and in 1816 by Galès. At Vienna they were introduced by De Caro in 1819, and they were afterwards employed in Naples by Asalini, in Dublin by Wallace, and in London by Anthony Clarke. A trial of these fumigations was made in the General Hospital at Vienna, the boxes invented for the purpose by Galès being used; but the results obtained were not such as to lead to further adoption of the method, for it was found to set up an artificial eruption which so greatly prolonged the treatment that its average duration exceeded four weeks."

"It may be argued that among patients subjected to sulphur vapour 'return cases' are not common. There are no immediate returns, because, the more accessible insects having been killed, a latent period is established before the disease appears anew. During this latent period the apparently cured individual rejoins his unit, where he has ample opportunity of infecting a number of other men. Thus the treating medical officer has not time to see the final results of his methods.

"I have had occasion to treat many thousands of soldiers with scabies, and under service conditions I believe nothing is superior to sulphur ointment applied for three days after a preliminary hot bath—provided these things are done properly and under suitable supervision. A remedy discredited by so acute an observer as Hebra almost a century ago does not appeal to me as a substitute for an established treatment. Remedies such as sulphur vapour, since they do not cure, but only manufacture what perhaps may be called 'scabies carriers,' are responsible for the spread of this disease amongst soldiers.

"I hope Colonel Bruce will not think I have too strongly or unfairly criticised his paper, especially as I have not had the pleasure of hearing it. I have founded my remarks upon an article in the *British Medical Journal*, and upon the observation of cases coming to this hospital. If he can show the method he employs is the best for conditions in France then I will be most happy to adopt it and follow it."

While I have had much experience of treating scabies in a variety of ways, including vapour, I am bound to say that I think the treatment of Hebra, if carried out efficiently, is still the best possible, in the majority of cases. As has been pointed out by Major MacCormac, it is essential, in the first place, that the diagnosis should be proven, and it seems to me that the practice of demonstrating the acarus is not taken up and studied to the extent it ought to be. In practice, it is not what one thinks a case is, but what it is, and proof is essential. Secondly, there is the necessary opening up of the burrow, and, thirdly, the *efficient* application of soft soap and sulphur ointment for a limited period, so as to avoid secondary dermatitis. I cannot do better than refer you to what I think is an exceedingly clear and practical and up-to-date statement on the treatment of

* *Diseases of the Skin*, ii, p. 241; Sydenham Society translation.

scabies in the *Lancet* of February 10th by Dr. Adamson. He gives the exact quantities used: 24 oz. of sulphur ointment, 24 oz. of soft soap, each of which is divided into three applications, and the inunctions are thorough and complete. Then if, in a few days, there is itching, a sedative lotion is applied. The efficient disinfection of clothes is essential, which perhaps we have the better opportunity of controlling in London than abroad. I have seen the best results from the aforesaid, both in private and hospital practice, and—I say it with respect—I do not see how it can be improved upon. The conditions at the Front are such as I am not familiar with, but I still think the chief part of the difficulty may be that the remedy is insufficiently and inefficiently applied. The condition of the skin of some people is such that they cannot tolerate inunctions, and for them vapour, etc., may be advisable. The method I have referred to need not occupy the soldier more than three or four days, and after that he will no longer be a carrier of infection.

Lieutenant-Colonel BRUCE (in reply): There are certain points which I might have mentioned showing the effects of the treatment when carried out carefully among a large body of troops—*e. g.*, I demonstrated the method to the chief medical officers of the Southern Army in July last, and I had several cabinets available, but the difficulty was to get patients. We could not find a single case of scabies in the whole division, though the medical officers of units made a careful search for them. We had to import some cases from another district for the demonstration. Again, last week I carefully superintended the examination of 4000 men before they were sent overseas, and instructed the medical officers to pay special attention to scabies. We found one recent case, in spite of the fact that most of these men had been living in overcrowded conditions—an environment conducive to the spread of the disease. I had not heard of the treatment being used in the Army before Captain Hodgson and I started the method in May, 1915. The main point about the treatment is that the medical officer must give personal and careful supervision. If he leaves it to the orderlies they will become slack, and there will be a lot of return cases. From the military point of view the chief advantage is that we get the men back the same day, and the treatment does not seriously interfere with their duties. I supervise the issue of drugs to the division, and I know that no sulphur ointment or lotion has been supplied for the treatment of scabies during the past eighteen months.

CLINICAL NOTES.

A CASE OF GONORRHOEAL KERATOSIS.

By CAPT. W. HERBERT BROWN, M.D., R.A.M.C., AND

CAPT. H. HARGREAVES, R.A.M.C.

FROM an investigation of about 20,000 cases of gonorrhœa only three cases of undoubted gonorrhœal keratosis have come to our notice. Though seemingly rare, McDonagh and Winkelreid Williams admit that the condition is more common than is generally supposed,

and there is no doubt that keratosis of a mild degree might pass unnoticed both by patient and medical officer, especially as the condition would give rise to little or no discomfort, and disappears as the patient recovers.

Keratosis of marked degree is, however, very rare; only about six cases have, I think, been recorded in British literature—more among continental authors. The condition is an interesting one from a dermatological point of view, and not a serious complication in itself, but rather a manifestation of a greater saturation of a patient's tissues with products directly or indirectly due to the gonococcus.

In the first case which occurred in the hospital to which we are attached, and which has been sent for publication in the *British Medical Journal*, the lesions were comparatively few, small, and discrete, without any intervening alteration of the skin, whereas in the present case the keratosis was more generalised over the soles of the feet. Good photographs have been taken, which should add considerably to the mental picture of this interesting condition.

History of the case.—Patient, aged 30 years, was a reserve soldier in a cavalry regiment. He had had two previous attacks of gonorrhœa, the first seven years ago, the second three years ago. In both he had treatment for four to six weeks—irrigations with potassium permanganate and copaiba internally—and from both he got completely well without complications. On August 13th, 1916, he developed his third attack—two weeks after exposure—and was admitted to hospital on August 16th, 1916, with a purulent urethral discharge, temperature 100° F., and complaining of rheumatic pains. Both knee-joints were swollen and tender. Five days after admission both knee-joints were tapped, the effusion being so marked. From the right knee 165 c.c. of serous fluid were withdrawn, and from the left 135 c.c. Within the next ten days the right knee-joint was tapped twice—90 c.c. and 50 c.c. of fluid withdrawn respectively. No gonococci were found in the fluid.

Skin condition.—On admission there was no trace of any skin-lesion, and there was no abnormal thickening of the soles of his feet. About two weeks later patient noticed hard lumps appearing on the heels and balls of the feet, which got gradually larger. On the right foot he picked the hard places, peeled off the superficial skin, and, as he himself stated, picked out a hard, brownish crust about $\frac{1}{4}$ in. thick.

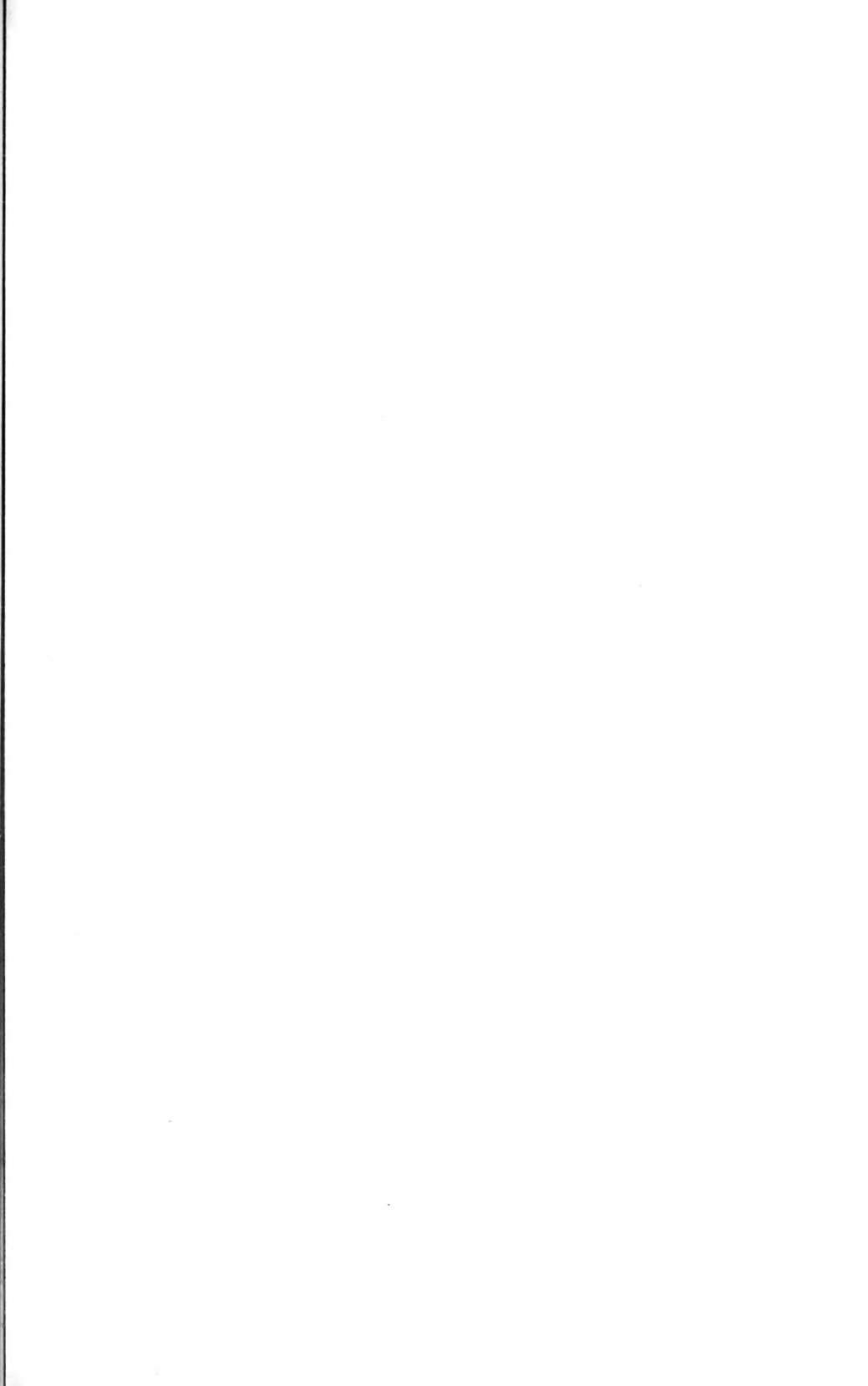




FIG. 1.

TO ILLUSTRATE CAPT. W. HERBERT BROWN AND CAPT. H. HARGREAVES' CLINICAL NOTE ON A CASE OF GONORRHOEAL KERATOSIS.



FIG. 2.

This happened before he drew the attention of his medical officer to the condition. The patient made a complete recovery, the hard, horny domes, the thickened hypertrophic skin coming off gradually during convalescence—though the process was hastened by steeping the feet in alkaline baths.

Treatment consisted in daily irrigations with 1 in 8000 potassium permanganate, and a mixed gonococcal and staphylococcal vaccine given every second day in increasing doses, beginning with gonococcus 100 million, staphylococcus 250 million, up to gonococcus 300 million, and staphylococcus 750 million.

Prostatic massage was given every second day and hot hip-baths daily for the condition of the prostate. A moderate degree of prostatitis existed; the gland was generally enlarged and hard. There was a purulent discharge after massage for the first three or four treatments, but this gradually subsided, and Capt. Hargreaves had the impression that the improvement both of the knee-joints and the keratosis was more rapid when the prostatitis subsided and this focus of infection was removed.

This case, like the first case in this hospital, and like most of the other cases recorded, was associated with marked arthritis with effusion into the knee-joints, and occurred in a patient who had had more than one attack of gonorrhœa.

Fig. 1, taken about six weeks after admission, shows the appearances found. On the right foot are seen the areas which the patient picked and removed the underlying hard, horny crust, while the skin on the left sole remained intact. As will be noticed, there is a generalised plantar keratosis over the pressure areas of the feet, while, under the arch of the feet, the skin remains almost normal. Over the heels and balls of the feet the thickening is very marked, with hard, horny central areas, forming slightly elevated domes; in the photograph these are shown as dark spots, which are clearly seen on the left foot. One horny dome was present behind the left heel—quite beyond the seat of pressure. On the plantar surfaces of the toes there was some thickening, specially marked on the right great toe. On the tip of the great toe and around the nail there was a similar hypertrophic condition, but the skin was softer than on the soles, and the condition around the nail was suggestive of a septic onychia, but there was no accompanying tenderness. In due course

the nail was shed completely. The fourth toe likewise became affected, and likewise shed its nail.

There were no other skin-lesions, and nothing on the hands except a little thickening under the distal end of the right little finger. The knee-jerks were exaggerated, but no other signs referable to the nervous system were present. There was no conjunctivitis or iritis as is frequently present in this condition.

Fig. 2 was taken several weeks after the first, and shows the very marked improvement in the condition.

(Since this note was written Dr. Graham Little has published an interesting article on "Keratoderma Blenorrhagica" in the *Practitioner* of December, 1916, giving a report of all the published cases known.)

MORPHŒO-SCLERODERMIA OF THE SHINS ASSOCIATED WITH OSTEITIS DEFORMANS.*

By GEORGE PERNET, M.D.

So little is known as to the essential cause or causes at work in the production of sclerodermia, although a variety of explanations have been put forward, that its association with other morbid conditions is worth placing on record. As far as I have been able to make out its occurrence with osteitis deformans has not been alluded to up to the present. I admit I have not gone through the literature of sclerodermia and of osteitis deformans in an exhaustive or systematic manner, so that I am open to correction on the point. As far as I am concerned I cannot recall the association, although I have seen a number of cases of sclerodermia both in the course of a long dermatological practice and at societies. With regard to osteitis deformans, we are also dealing with a disease of obscure origin. Apparently absolutely nothing is known concerning its aetiology, nor has any method of treatment had the slightest influence on its progress (Osler). So we are doubly in the dark. Whether in the case I am about to describe we are dealing with an accidental association or with some common morbid factor or factors acting on the bones and the skin, I cannot tell, but the chances are, from a review of the

* The case was shown at the Royal Society of Medicine (Dermatological Section) on December 21st, 1916.

cases originally described by Sir James Paget, that the former assumption is the correct one.

In 1876,* and again in 1882,† Paget brought forward a series of cases, which he described in the first place as a form of chronic inflammation of the bones, with the sub-title of osteitis deformans, and subsequently under the name he had suggested and as we refer to it now. In all Paget described twelve cases, all but three in males. There is no mention of anything in the way of sclerodermia in the details furnished.

After these short introductory remarks, I will now describe the case which came under my observation. The man was a Belgian, originally from Antwerp, a motor-fitter, aged 54 years, who first attended my skin department at the West London Hospital on August 25th, 1916, for a thickening of the skin over the shins. The duration of the cutaneous change he gave as eighteen months. This began as a blush over the present areas of the sclerodermia on the front of both legs. Gradually the areas became hard. When first seen they presented a lardy, fawn-coloured appearance with a faint, but definite lilac border. It is on account of this and the fact that the disease commenced as a blush that I have called the case one of Morpheo-sclerodermia. The involved areas corresponded roughly to the greaves or *cnemides* of the ancient Greek *Hoplites*, and of *Goliath*, who "wore greaves of brass on his legs." The change in the skin was not preceded by any illness. He gave an old history of a spontaneous fracture of the thigh, about which I shall have more to say later on. The forward bowing of the legs and the bending of the spine began to show themselves some sixteen years ago, viz. two years after the afore-mentioned fracture, and have gradually become accentuated.

I did not see him again until I showed him on December 21st, 1916. Meanwhile he had been to Oxford, where he injured his right tibia by knocking up against a chair in the dark. He was in the Radcliffe Infirmary there for a time. Returning to London, he was admitted to St. Bartholomew's Hospital under Dr. Horder, who kindly wrote to me about the case and informed me that there was a small fracture (crack) of the front of the right tibia following the recent accident at Oxford revealed by a radiograph of the bone.

* *Medico-Chirurgical Transactions*, 2nd series, vol. xlii, 1877, p. 37.

† *Loc. cit.*, supra, 2nd series, vol. xlvii, 1882, p. 225.

On December 22nd, 1916, he was admitted to the West London Hospital, as he had discharged himself from St. Bartholomew's. I asked Dr. Saunders to see the man from the general point of view, and Dr. Morton kindly made several radiographs of the bones, confirming, as to the right tibia, what had been found at St. Bartholomew's, and, in addition, more or less deformity and thickening of the long bones (femur, humerus, ulna, radius on both sides) (Radiograph No. 2774), with sinking of the head of the right femur to almost a right angle, accounting for the shortening of the right leg as compared with the left. Now as to this, the following details from the notes of St. Thomas's Hospital, for which I am much indebted to Mr. A. H. Richardson, Surgical Registrar there, confirming the patient's story of his spontaneous fracture some sixteen years ago (not eighteen, as he originally stated): "He was admitted to St. Thomas's on July 15th, 1901. He gave a history of a spontaneous fracture. There was $\frac{3}{4}$ in. shortening, very little crepitus, and much swelling. He was treated by plaster-of-Paris, then by extension, and afterwards by massage. On August 20th there was $\frac{3}{4}$ in. shortening, and a large mass was felt round the site of the fracture. Mist. pot. iod. gr. xx to $\overline{3j}$ was ordered from July 25th until he left St. Thomas's on September 20th, 1901. The X-ray report, taken shortly after admission, stated that there was a transverse fracture of the upper third of the right femur and the edges of the fragments were surrounded by flaky shadows, which in some places looked like those of malignant growth, but in others like strips of periosteum."

Whilst in the West London Hospital, the Wasserman reaction proved to be negative. I mention this as a matter of information. There was nothing suggesting syphilis about the patient. Sir James Paget insisted in his original papers that there was nothing connecting the disease with a syphilitic origin, and that antisymphilitic treatment proved useless. But that was many years ago, and perhaps present-day treatment might give better results. Leredde* states that, according to Lannelongue, Fournier, and others, osteitis deformans appears to be frequently, if not always, of syphilitic origin. Further, that in a communication to the *Société Médicale des Hôpitaux* (1913), seven cases out of eighteen gave a positive blood-test, and that where this was negative there was clinical evidence of

* Leredde, *Le Domaine de la Syphilis*, 1917, p. 89.

syphilis. Dufour and others have reported that treatment on these lines was useful. The disease has also been observed associated with tabes. Esmein* has insisted on the importance of cardio-vascular changes observed during life or post mortem. The lesions found were usually aortic; at times the myocardium was involved.

As to sclerodermia, the idea that syphilis played a part has occurred to many of us. In the case of an elderly woman with sclerodermia of the legs and feet, under my care at the West London Hospital, and in whom there were typical syphilitic scars about the knees, great improvement followed the administration of mercury in pill form. Jeanselme and Touraine obtained good results in a woman, aged 48 years, with stigmata of congenital syphilis, by means of mercurial treatment. In her case the Wassermann reaction was positive, and there was distinct lymphocytosis of the cerebro-spinal fluid. But in another case of rapidly spreading diffuse sclerodermia in a woman with secondary syphilis (Wassermann positive, cerebro-spinal fluid normal) observed by Brocq, Fernet, and Maurel, specific treatment did not influence the sclerodermia. But Leredde† remarks that the treatment employed was rather mild and of short duration.

With regard to the Wassermann reaction, it is scarcely necessary to point out in this place that though it may be positive both in osteitis deformans and sclerodermia, that does not prove that either are of syphilitic nature or origin.

I may add that the patient has again been lost sight of, and may drift into other hands. If so, this note may be of some interest to other dermatologists, who may help us to follow up the case.

ROYAL SOCIETY OF MEDICINE.

DERMATOLOGICAL SECTION.

MEETING held on January 18th, 1917, Dr. J. H. STOWERS, President of the Section, in the Chair.

Dr. E. G. GRAHAM LITTLE showed a case of *small-spored ringworm of the scalp in an adult*. He said it was an unusual example of the contraction of small-spored ringworm by an adult. The patient's two

* Esmein, *Progrès Médical*, March 29th, 1913 (cited by Leredde).

† Leredde, *op. cit.*, pp. 81-82.

children, who were shown with her, had had ringworm, or showed symptoms of it, in October, and a few weeks after that their mother noticed that she had a patch on the scalp. He saw her about a week ago, and there was a typical patch, and the small-spored fungus in the hair. He proposed to make a study of the cultural characteristics of the fungus, for which there had not been time, and to make a later report. He never met with a previous case of ringworm of the scalp in an adult, and it was certainly rare.

Dr. MACLEOD said that in all his experience at Charing Cross Hospital and the Victoria Hospital for Children, he had only seen one instance of *Microsporon audouini* affecting the adult scalp. It was a case which he showed years ago at the Dermatological Society of London, in which a mother was infected in the occipital scalp by her child, who was suffering from scalp ringworm. He had seen, however, several cases of this fungus affecting the glabrous skin in adults.

Dr. W. J. OLIVER mentioned that in 1915 Dr. Sequeira and he showed cultures from a case of microsporon infection in a mother and child. These were considered to be those of *Microsporon felinum*, but fresh studies of the same proved them to belong to a microsporon of the *Microsporon audouini* type. Last year he had a second similar example at the London Hospital, in a mother and her two children. He once obtained cultures which he considered to be a microsporon from a beard case in a man.

Dr. G. PERNET said they knew how rare it was to see microsporon in the scalp of adults, and especially to find it at the same time present in the children of the affected adult. In 1912 he published a case of *Tinea tonsurans* in a woman, aged 60 years.* Microscopically and culturally it was a *Trichophyton megalosporon endothrix*, and not microsporon as in Dr. Little's present case. The origin in his case was not traced.

Dr. J. L. BUNCH showed a case of *epithelioma of hand following traumatism*. The patient, an old soldier, was aged 66 years. Since his discharge from the Army he had worked as a packer. About twelve months ago he was unpacking a case of goods, when a splinter ran into the back of his right hand. Some time after, he noticed a wart developing on the site, and during the past six months it had increased considerably in size; it had also broken down and ulcerated, and, as a rule, there was a rather offensive discharge from it. He could not feel any enlarged glands at the elbow or the axilla. The growth seemed to be slightly adherent to the bone, but, so far, it gave him very little trouble: in fact, he had continued at his work until very recently. He had gonorrhœa twenty years ago, but denied spirochæte infection. Section of a portion showed typical

* Pernet, *Brit. Journ. Derm.*, 1912, xxiv, p. 141.

squamous-celled epithelioma. He brought the case so that he might elicit opinions on treatment from members. Was it generally thought desirable to use measures such as X-rays or radium, or to recommend total excision, or even amputation of the hand?

Dr. G. PERNET felt diffident about recommending anything short of amputation. He did not know whether fulguration was being used now after thorough surgical scraping and excising. Some of Keating-Hart's cases he saw in France some years ago appeared to have done very well. He had a feeling that this man's hand would eventually have to be amputated, perhaps under less favourable conditions, for the glands did not yet appear to be involved.

Dr. MACLEOD had under treatment a case of an epithelioma growing on an old-standing lupus patch. This he treated for some time with radium, but without success, and as he found that the lesion was progressing rather than otherwise, he discontinued the treatment. The patient was now having massive doses of X-rays, but the results from them were not satisfactory either. He thought that in this case, short of surgical measures, it might be worth while trying to see whether the lesion could be destroyed by freezing with solid carbon dioxide.

Dr. GRAHAM LITTLE had a case somewhat like this in a man under 40, who sustained a similar accident: he was struck on the face by a fragment from a boat, and two months afterwards he developed a lesion which he took to be rodent ulcer; clinically, it was typically so. He gave him two treatments with freezing, but after the second became rather alarmed at the rapidity of the local spread. He took a portion from a corner of it, and the microscope showed it to be typical squamous-celled carcinoma. The lesion was freely excised by a surgical colleague, but recurred in six months. It was again operated upon, and the triangles cleared of glands. He saw him about nine months afterwards, and by that time his mediastinum had become full of enlarged glands. It was evident that he would die in a short time. The whole duration of the disease was less than a year. It was probably carcinomatous from the beginning. In this case he advised excision, and scraping of the bone. He had an extraordinary case, one which started as a rodent ulcer on the chin. The patient had a multitude of things done for him, including the application of X-rays, radium, carbon dioxide snow, and ionisation. He was seen by Sir Alfred Pearce Gould, with himself, and Sir Alfred suggested having the bone scraped. But the patient did not wish to have that done, and arsenical paste was applied to the whole surface. When he saw him six months afterwards there was an amazingly favourable result: there was then no discharge, and he had never seen such a transformation.

Major GRAY said that, putting radium and X-rays on one side—because he was less able to express an opinion about them than many there—there were, in his opinion, only two alternatives in such a case as this. One was amputation, and the other treatment by arsenical paste. He did not think excision would, in this case, have any advantage over amputation; these carcinomata spread along the superficial lymphatics, and unless one excised extremely freely, removing large areas of skin, one was not likely to check the spread. Dr. Norman Walker had told him that he had had some cases of this sort associated with lupus of the face. Some of his cases were treated by excision, and others had arsenical paste

applied, and he had found the latter were less liable to recurrence. In such a case as this arsenical paste might be of considerable value, seeing that no glands could be felt, and, of course, they wanted to save the man his limb if possible. There should be a thorough scraping before the paste was applied. Arsenic caused considerable necrosis, far beyond the area to which it was applied, and a great deal of inflammatory reaction, which appeared to cause destruction of the outlying nodules in the lymphatics. It was only of value in these slowly growing tumours with little tendency to glandular involvement. Pain was not such a prominent feature as one might imagine, but it probably depended on the site of the lesion, and it could be controlled by morphia.

Captain HANNAY said he was in Edinburgh a little while ago, and saw several of Dr. Norman Walker's cases which had been treated with arsenical paste, and the results in the patients were extraordinarily good. But those patients whom he saw suffered great pain after the application. However, he did not see a lesion of the size in the present case so treated.

The PRESIDENT thought excision might be undertaken with good result if it was made sufficiently wide of the present growth, especially as there was no enlargement of lymphatic glands to be felt. Amputation might be required as a last resort, but he certainly would not recommend it at present.

Dr. S. E. DORE agreed that it would be unwise to waste time in applying radium and X-rays, and suggested free excision followed by the application of X-rays, with the view of obviating the larger operation.

Dr. BUNCH (in reply) said he had intended to bring another case to contrast with this. The patient came to him with carcinoma of the side of the face, secondary to Lupus vulgaris. He had massive doses of X-rays for about a month, and when seen a fortnight ago the growth had progressed so far that there was a huge perforation in his cheek, so that one could see across his mouth and the dorsum of his tongue. As he did not come to the hospital when due two days ago he feared the worst. The case had discouraged him from using X-rays for such conditions. He had treated one case with arsenical paste, but the pain was so intense that he did not feel keen about that either.

Mr. J. E. R. McDONAGH showed a case illustrating the *oxidation and reduction theory of therapeutics (case of mercurial poisoning cured by intramine)*. Some time ago he propounded the theory that metals acted as oxidising agents, and that non-metals acted as reducing agents. In other words, he considered that the arsenic in salvarsan, the iron in ferrivine, and mercury did not attack the parasites directly but only indirectly, by increasing the oxidising action—a surface action—of the colloidal protein particles in the serum. Iodine and sulphur acted as reducing agents, and were therefore complementary to the oxidising agents just mentioned. This being the case, the therapeutic programme was incomplete, without the combined use of both oxidising and reducing agents.

The following cases appeared to bear out this theory in a striking manner :

The patient whom he showed had a primary sore on the skin of the penis, general adenitis, and was more or less covered with a follicular syphilitic eruption. On December 12th, 1916, 10 c.c. of a new colloidal mercurial preparation were injected intravenously. In the quantity injected there were nearly 8 gr. of colloidal mercury, the action of which would be very much greater than 8 gr. of ordinary mercury. The following day the patient had severe abdominal pain and diarrhœa. The diarrhœa increased, and blood was passed *per rectum*. This continued for a week, and during that time not a drop of urine was passed. On the second day severe stomatitis set in, which became gangrenous a few days later. The patient also had hæmorrhagic conjunctivitis and herpes oris ; he both looked, and was, desperately ill, and he had fears that he might die. This was a typical case of acute mercurial poisoning, and the mercury was acting as a poison in virtue of its oxidising power. This being the case it struck him that the administration of an equally powerful reducing agent might cure the condition. He injected 100 c.c. of colloidal iodine intravenously and 5 c.c. of intramine intramuscularly. Within forty-eight hours the diarrhœa ceased, and the patient passed nearly his full amount of urine. The condition improved so much from day to day, that with no other treatment whatever, he was perfectly well by December 30th. There was no albumin in his urine, and every syphilitic symptom had vanished.

Another patient received 10 c.c. of the same mercurial preparation injected intravenously on the same day as the case exhibited, having already had 10 c.c. injected intramuscularly three days previously. Therefore the patient had about 15 gr. of colloidal mercury in his system. This patient had exactly the same symptoms as above described, and recovered in the same way, after an intravenous injection of colloidal iodine, and an intramuscular injection of intramine. He had had three other cases in which the symptoms were not so pronounced, which improved at once with one injection of intramine. In all these five cases the syphilitic manifestations disappeared in a few days, and some of the lesions were such as would not have vanished with six or more injections of salvarsan.

He had had two cases of generalised arsenical dermatitis, in which

the skin eruption entirely disappeared with one injection of intramine. One of these cases was that of a woman, who was treated with six injections of galyl for cerebro-spinal syphilis in April, 1916. After this course mercury was taken internally for nine months. A severe arsenical dermatitis set in after the last galyl injection, and persisted, in spite of treatment, for nine months, when the symptoms of the cerebro-spinal syphilis reappeared. Within three days after an intravenous injection of colloidal iodine, and an intramuscular injection of intramine, the dermatitis had practically disappeared.

Recently he had had a case of intramine poisoning—the patient had 20 c.c. of a 0·1 per cent. solution injected intravenously. The symptoms were headache, abdominal pain, and persistent vomiting and diarrhœa, all of which immediately disappeared after an intravenous injection of colloidal mercury. These cases, he thought, went a long way to prove the correctness of his theory of oxidation and reduction, as well as to show what a much greater therapeutic action could be obtained by combining oxidising and reducing agents, than by using only oxidising agents as was now the rule.

Major GRAY thought the facts which Mr. McDonagh had brought forward were extremely interesting, and required considerable thought; it was not easy for some of them to discuss them at a moment's notice. The point which interested him was the arsenical dermatitis in the patient mentioned. He gathered that no treatment had been given for the nine months during which it had lasted. [Mr. McDONAGH: Mercurial treatment, but no arsenic.] He thought it was a question whether the persistence of the dermatitis was entirely due to the presence of arsenic in the tissues; one would have imagined that by that time the arsenic would have been excreted. So it was a question whether the clearing up of the lesion was due to the neutralisation of arsenic by the intramine, or whether there was not a direct action of the intramine on the inflamed tissues. With regard to the question of the rapid clearing up of the mercurial stomatitis and poisoning generally, to which he referred in the case he had exhibited, it seemed to him that they were dealing with a type of mercurial poisoning which they had not met with before—namely, that resulting from the intravenous injection of a very large dose of the metal itself. And it was possible such a case might run a different course from one in which the drug had been given in an ordinary medicinal way. Therefore it was conceivable that the symptoms might have cleared up almost as rapidly as they came on. He threw that out as a suggestion. It did, however, seem as if in the cases quoted there was something definite in the reaction of the body to those opposing types of drugs.

Dr. BUNCH asked if Mr. McDonagh looked upon all metals in the body as oxidising agents, and did he suggest intramine for all cases of metal poisoning

—to take a common example, lead poisoning, which was a much more chronic affair than the case which Mr. McDonagh was now showing?

Mr. McDONAGH (in reply) said that the case was exhibited to support his oxidation and reduction theory of therapeutics, and not to point out the merits or demerits of the colloidal mercurial preparation used, or even to state in what doses this drug was best prescribed. It was known that arsenic might persist in the body for several months after it had been injected, but whether the dermatitis in the case described continued for so long owing to the direct presence of arsenic in the skin or not, was a point impossible to determine. Major Gray's hypothesis that the symptoms of mercurial poisoning might have disappeared as quickly as they arose, owing to the fact that the drug was administered intravenously, was extremely unlikely, for there was no difference in the length of duration of the symptoms of arsenical poisoning, whether the arsenical compound was injected intramuscularly or intravenously. Moreover, the more acute the case, the greater the likelihood of a fatal termination—a result which Major Gray would have anticipated with him in the cases described had he had an opportunity of seeing them at their worst. Therefore there could be little doubt that the patient's life was saved by the timely use of the reducing agents described. In answer to Dr. Bunch's question, he held that all metals acted as oxidising agents *in corpore*. He also believed that intramine would prove extremely useful in all cases of metallic poisoning—a view upheld, for instance, by the beneficial influence of iodine in cases of plumbism.

Dr. GEORGE PERNET showed a case with *late congenital syphilis manifestations*. The patient was a boy, aged 14 years, first seen by him on January 8th, 1917. The uvula and soft palate were extensively ulcerated, with some destruction. The duration was six months. At the time, he noted the Olympian forehead with marked frontal
a bosses and also the irregular implantation of the teeth pointing to congenital syphilis, but there was no typical notching. The mother had had one stillborn child and a miscarriage. The patient complained of nocturnal headaches, which improved on the administration of mercury. On January 12th a Wassermann reaction was done and was positive, though this did not prove that the throat condition was necessarily syphilitic. The differential diagnosis lay between syphilis and tuberculosis; though the large amount of ulceration and destruction of six months' duration only were in favour of a syphilitic origin. The patient was, undoubtedly, a congenital syphilitic.

Subsequent note.—The patient improved at once on iodide of potassium and the ulceration healed up.

MEETING held February 15th, 1917, Dr. J. H. STOWERS, President of the Section, in the Chair.

Lieut.-Col. JOHN BRUCE, R.A.M.C.(T.F.) read a short paper on the *treatment of scabies by sulphur fumigation*, which is reported on p. 100 of this issue.

Dr. J. L. BUNCH showed a case of *xantho-erythrodermia perstans*. The patient, a man, aged 21 years, had a number of slightly scaly, erythematous patches on the trunk and lower limbs. The first patch showed itself more than two years ago, and numerous other patches had since made their appearance. The lesions were irregular in shape, and varied in size from a shilling to the palm of the hand. They did not cause any irritation. The patches, once they had made their appearance, persisted, but took on a more yellowish tint. They were extremely resistant to treatment.

Major GRAY agreed with Dr. Bunch's diagnosis, but would be satisfied by calling it "Parapsoriasis en plaques"—the most convenient name for the group to which this case belonged. He was unable to see any advantage in inventing a name which merely described the colour of the lesions in certain of these cases, but if Dr. Bunch was anxious for a special name for his case, he suggested he should invent one in which the colours purple or brown were included, and not use one in which the lesions were described as yellow and red.

The PRESIDENT thought the absence of itching in the case was somewhat unusual. He thought there was nothing against this man being accepted as a combatant.

Dr. BUNCH (in reply) said he did not think the absence of itching was unusual. There were only a few cases on record, and of these the majority showed no sign of irritation. He looked upon this as a case of Parapsoriasis en plaques, or Xantho-erythrodermia perstans. He was in no way responsible for the name, which was first used by Radcliffe Crocker.

Dr. J. H. SEQUEIRA showed two cases of *follicular keratosis* (*Lichen pilaris*, *Lichen spinulosus*). He brought the two cases for comparison and contrast. Histologically the conditions were almost identical, the only difference being that in the elder patient the horny plugs which filled the mouth of the follicles were dome-shaped, while in the younger the horny plugs were of the typical pointed character. The following were brief notes of the cases:

"S. B—, aged 68 years, a married woman who has had nine children, has had good health until four months ago, when she complained of irritation of the chest. This irritation continued for a

month and then spread all over her body. She then noticed that the chest was studded by a large number of "little lumps." Scattered over the whole of the chest and back are many small dome-shaped follicular papules of a brownish tint, the central part of each papule being much darker. On palpation the lesions are hard and give a nutmeg-grater-like feel to the surface. On compressing one of the papules a solid brownish mass may be extruded from the pilar orifice. The lesions are rarely larger than a millet seed, but in some cases they are as large as a split pea. These papules are distributed over the trunk, thighs and arms, more especially the extensor surfaces, and they are larger in the groin. The patient has been out of health, has slept badly, and has been admitted into the ward, where she has been kept at rest. Great improvement has followed regular bathing and the application of a salicylic acid ointment.

"H. B—, a half-caste little girl, aged 7 years, is in good health, and has never had any serious illness. Two months ago the mother noticed that the skin of the shoulders and of the rest of the trunk and upper limbs was covered with spiny projections. The case is a characteristic one of Lichen spinulosus."

As already mentioned, histologically these two cases were representative of a process of keratinisation in the hair follicles. There appeared to be very little inflammatory change in the neighbourhood of the lesions, which took the usual staining. In neither case was there any element which could be recognised as Lichen planus. He was aware that Dr. Adamson believed that in the majority of these cases Lichen planus developed sooner or later, especially in the type seen in the elder woman. He would watch both cases with interest with a view to seeing whether this interesting change took place.

Dr. S. E. DORE showed a case for *diagnosis*. The patient was a woman, aged 55 years. For three years she had had a lesion in the right scapular region which she said began "as a small red spot," and gradually increased in size. It had never ulcerated, but became sore and discharged as the result of a plaster she put upon it. There was now a raised mass apparently consisting of hypertrophied granulation tissue, measuring 2 in. in its longest diameter and $\frac{1}{2}$ in. transversely, situated upon a deep indurated base which extended subcutaneously for about $\frac{1}{2}$ in. around the external lesion. There was

no history of syphilis or tuberculosis, and the Wassermann reaction was negative.*

The PRESIDENT regarded the case as of tuberculous nature, and not syphilitic.

Dr. EDDOWES said that its appearance suggested to him that it was scrofuloderma.

Major GRAY said he once saw a case like it. The lesion was on the breast; the patient, a woman, ran a knitting-needle through her clothes there. The lesion persisted for two years, and showed no sign of healing. It yielded readily to yellow oxide of mercury in zinc paste, which was kept tied on. But that case was not infiltrated to anything like the degree in this case. He suspected the intense hardness was due to keloid formation, but one could not ignore the possibility of a new growth, therefore he thought a biopsy should be done before deciding on the treatment.

Dr. S. E. DORE showed a case of *dysidrosis* (*cheiropompholyx*). The patient was a prison warder, aged 43 years. He had suffered for five months from a vesicular and pustular eruption, almost entirely limited to the thenar eminences of both hands, although occasionally he had a few scattered vesicles on the knuckles and sides of the fingers. The disease followed a septic finger-nail due to the prick of a pin in September of last year, and at that time the eruption covered the whole of his hands. He had called the condition dysidrosis, although he thought there were objections both to the name and the diagnosis. There was a possibility of local irritation due to the fact that he previously worked with tar twine used for the seaming of coal sacks, and his duties necessitated the frequent handling of prison keys, but he has taken precautions to avoid irritation from these causes and the eruption still persisted. He did not think there was any reason to suppose that it was an artefact.

He had had stimulating and soothing ointments and lotions, also X-ray treatment and a vaccine prepared from a staphylococcus showing on culture buff coloured colonies (not typical aureus) isolated from a recent pustule, but no treatment had been successful up to the present time, and the pustules cropped up again soon after they had been removed.

Major GRAY said he would be inclined to fix it up with ichthyol-zinc-gelatine. He suspected that there might be an "artefact" element, possibly quite an innocent one.

* Subsequent microscopical examination showed the growth to be a sarcoma.

The PRESIDENT said he would be inclined to puncture the vesicles and pustules, get them thoroughly empty, touch them with 90 per cent. carbolic acid, then paint them daily with 2 per cent. salicylic acid in alcohol. It was possible the treatment had been inefficient because the patient had not been continuously under observation and control. There appeared to be some septic infection which had never been completely removed—probably a secondary condition.

Dr. ALFRED EDDOWES said the case reminded him of one which he recorded some years ago, in which the patient burned his hand against a greenhouse stove. For three summers he had "erysipelas" of that hand, which the late Dr. Crocker thought was due to handling the "primula obconica." It was finally cured by strapping it with mercurial plaster, which produced very considerable reaction and a small abscess, which had to be opened. Possibly similar treatment would be successful in this case.

Dr. E. G. GRAHAM LITTLE showed two cases of *Lupus erythematosus* of unusual extent. CASE 1.—The patient was a Russian Jew, aged 50 years, a teacher, long resident in this country. The disease had commenced sixteen years ago, on the face, and now covered the cheeks, the nose, ears, forehead, and nape of the neck and behind the ears. There were also discrete lesions on the dorsum of the hands. The scalp was free. There were two very remarkable patches of the disease, oblong in shape, with the long axis at right angles with the axis of the vertebral column, situated at the level of the ninth dorsal vertebra, 3 in. by $2\frac{1}{2}$ in. and 2 in. by $2\frac{1}{4}$ in. respectively, with several small satellite lesions near the edges, the patches being sharply circumscribed by a vividly red border, which recalled the picture of Colcott Fox's Erythema gyratum. A diagnosis would perhaps have been difficult if he had not had the other manifestations of the disease to guide him. The man had been under the care of numerous physicians and had not benefited by any treatment, the disease spreading slowly all the time. The urine was normal.

CASE 2.—The second patient was a girl, aged 26 years, who had had the disease for seven years. It had commenced on the face, which was now extensively diseased, and had more recently, within the past twelve months, invaded the upper arms, forearms, and hands, the latter since Christmas. But the chief interest of the case lay in a new, rather indefinite, eruption of blotchy erythematous type which was seen all over the chest, back and front, and had developed within the past two weeks. The patient was taking quinine in doses the quantity of which could not be ascertained, and the possibility of the eruption being determined by

the drug had to be considered, as well as the more serious alternative, that the new eruption was the beginning of a rapidly generalising Lupus erythematosus, a possibility of which the steady and undoubted extension of the disease on the arms offered some corroboration. There was no phthisical history, and the urine was normal. The scalp remained unaffected notwithstanding the extensive distribution on the face.

Dr. E. G. GRAHAM LITTLE showed a case of *chronic ulceration of the legs in a young girl, aged 12 years*. The case was under his observation in St. Mary's Hospital for six weeks from October 2nd to November 12th of last year. She then had exactly similar, but more numerous, deep ulcerations confined to the legs below the knees, back and front. The ulcers were the size of a shilling or larger, and developed very rapidly, with a strong superficial resemblance to gummata. The Wassermann test had proved negative twice, and there was no history of syphilis. There were about twenty or more ulcers on the two legs. Smears were taken from the pus, and films examined, but no mycelial threads nor specific organisms could be seen beyond the usual pyogenic cocci. Cultivations on glucose agar proved negative, these having been undertaken on the possibility of the ulcerations being due to sporothrix.

On October 13th she was tested with the injection of $\frac{1}{2}$ c.c. of old tuberculin, this dose being repeated next day, and 1 c.c. was given on October 16th. There was no appreciable rise of temperature after any of these tests, the highest fluctuation being half a degree. The patient was kept in bed, and fomentations of salt and citric acid solution were applied for four hours at a time, with dressings of eusol after their removal. On October 9th, pot. iod., in 10 gr. doses three times a day, was prescribed, and under this treatment she improved enormously, so that within four weeks the ulcers had completely healed and she was discharged.

She was readmitted on February 8th with new ulcers exactly similar to the old, but not on the same sites, although still confined to the leg. These were said to have developed within the last fourteen days. Renewed attempts to grow sporothrix have failed. The girl was well nourished, and presented no symptoms of tuberculosis. The diagnosis remained doubtful; the rapidity of development and of

cure seemed to him very unlike what took place in Bazin's disease, and the absence of reaction to tuberculin did not lend support to that explanation. The ulcerations were healing rapidly again with large doses of pot. iod. and local antiseptic dressings.

Dr. GRAHAM LITTLE also exhibited a case of *Érythème annulaire centrifuge* of Darier, the report of which was deferred until further study of it had been made.

Dr. S. W. ALLWORTHY showed a photograph of *acneiform eruption* of "doffers." In the flax-spinning mills of Belfast "doffers" were usually young girls whose occupation was principally to "doff" or remove the bobbins from the machines and to clean and oil them. The eruption was probably produced by dirt, sweat, and the sperm oil which was used for the machinery.

Dr. J. M. H. MACLEOD said the acneiform eruption seen in Dr. Allworthy's photograph was of interest as an example of the so-called "oil acne" or "bouton d'huile." In it the follicles became plugged with a mixture of dirt and oil, which caused inflammatory changes and produced the acneiform lesions. This condition was met with, not only in flax spinners, but in any form of work in which the skin was liable to be bespattered with oil, such as in stokers, engineers, mill-hands, etc. It was a milder form of the dermatitis from petroleum, shale oil, etc., which tended to go on to warty growths and cancer. It occurred on the arms from the drops of oil, and on the legs from contact with clothes saturated with oil.

MEETING held March 15th, 1917, Dr. J. H. STOWERS, President of the Section, in the Chair.

Dr. E. G. GRAHAM LITTLE showed a case of *Dermatitis herpetiformis* ("*Hydroa gestationis*" type). The patient was a woman, aged 32 years, the wife of the out-patient porter at a hospital. She was confined of a healthy child on February 20th, and developed a thrombus in the right leg, but there was otherwise no abnormal incident until just a week after delivery—i. e. on February 27th—when some grouped vesicles appeared on the wrists, and were followed speedily by similar groups on the limbs and by large bullæ, accompanied by the most intense pruritus. The mucosæ had remained exempt throughout, and except during a period of three days (milk fever) the temperature had been normal. She continued to suckle

the infant and had plenty of milk. He saw her first on March 12th, when the conditions were much the same as at present. Large surfaces of the body were occupied by fluid elevations of all sizes, from that of a pinhead to that of a tangerine orange. On the wrists, where the eruption began, they were chiefly small, and grouped in the usual herpetiform way. He would draw special attention to the large circinate erythematous patches on the forearms, which bore a close resemblance to the similar erythematous patches in the case shown by him at their last meeting, when he offered the suggestion that the case was an example of Darier's newly named group "Érythème annulaire centrifuge." The presence of these large erythematous rings, combined with typical Dermatitis herpetiformis, lent colour to Darier's contention, contained in the description of his group of cases mentioned above, that the cases of "persistent gyrate erythema" described by Fox in the *International Atlas of Rare Diseases of the Skin*, were really cases of Dermatitis herpetiformis. And it might interest members to know that in the last few days the case which he reported as Érythème annulaire centrifuge had developed a grouped frankly vesicular eruption which places it in the category of Fox's gyrate erythema rather than in that of Darier's new disease, which he carefully discriminated from Fox's cases.

It was interesting to note that the patient now shown had had a previous pregnancy not attended by any unusual symptoms, the child being now aged $3\frac{1}{2}$ years. The description of this case as "Hydroa gestationis," notwithstanding that the appearance of the eruption took place only after delivery, was warranted by a similar history of several other cases, one* for example reported by himself, in which the eruption came out some three weeks after delivery. And several other instances of this delayed development, though it was comparatively rare, were to be found in the literature, notably those reported by Lesser† and Galloway.‡

Dr. PRINGLE accepted Dr. Little's diagnosis of Dermatitis herpetiformis, or, what was perhaps a better descriptive term, Hydroa gestationis. There was one point in connection with it which he would like to raise, and it was this—that

* *Brit. Journ. Derm.*, 1901, xiii, p. 419.

† *Ibid.* (abstract), 1899, xi, p. 258.

‡ *Ibid.*, 1901, xiii, p. 413.

with every successive pregnancy this disease tended to get worse, and so the question arose whether this woman ought to allow herself to become pregnant again, because if she repeatedly did so, the probability was that this skin-disease would ultimately kill her. He had seen one case which began as *Hydroa gestationis*, and which, after nearly twenty years, proved fatal by perforation of the intestine. She went on having children, and with each successive child her eruption got worse, and the interval between the attacks became smaller and smaller, until finally the eruption was a continuous one. It attacked the mucous membrane of the mouth, spread down the œsophagus, and finally caused ulceration of the bowel. He made the post-mortem examination himself. He had been consulted more than once in cases of *Hydroa gestationis* as to whether it was a legitimate thing to allow the patient to become pregnant again. The opinion he expressed might or might not have been ethically right, but it was to the effect that further pregnancies were dangerous, and liable to lead finally to a fatal termination.

Dr. G. PERNET agreed with Dr. Pringle that such women ought not to become pregnant again.

Dr. GEORGE PERNET showed a case of *Morvan's disease* (*syringomyelia*). The patient was a man, aged 26 years, a metal-trimmer at present, but previously a brewery cellarman. He had been under treatment for cracks and fissures of the hands, which were originally attributed to bottle-cleaning, in which acids were used, and to cold weather. Bad whitlows from which he suffered from time to time had been opened, and necrosed bits of bone removed from the ends of some of the fingers. The disease started some two or three years ago. Some of the fingers were thickened (cheiromegaly of Charcot), nails deformed, a painless whitlow here and there (*Panaris analgésique*), fissures in the palms. The picture reminded him of the case he had seen when attending Charcot's clinic at the Salpêtrière in 1891, and which was described and depicted by him in a lecture,* when the syringomyelic nature of Morvan's disease previously described by him in 1889† had been demonstrated by Joffroy.

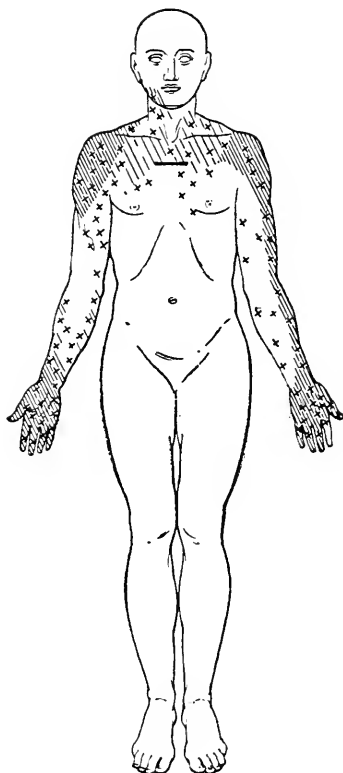
He made the diagnosis of syringomyelia (Morvan type) and asked their neurologist, Dr. Grainger Stewart, if he would go over the case from the point of view of the dissociation of sensation. This he very kindly did, and returned the case with a note confirming the diagnosis of syringomyelia. He was indebted to him for the annexed diagram. In his report he noted that (1) the *cranial nerves* were normal; (2) *Sensory* loss as described in diagram; (3) *Motor*: ? as to wasting of some hand muscles—no weakness of lower extremities; (4) *Re-*

* Charcot, *Clinique des maladies du système nerveux*, 1892, i, pp. 243 et seq.


† *Idem, ibid.*, pp. 1 et seq., with figures.

flexes: Those of upper extremities diminished or absent; *knee-jerks* increased; *ankle-jerks* increased, clonus on left.

As to lepra, he excluded that as the patient had spent all his life in



Case of Morvan type of syringomyelia. Patient is a bad witness. The loss to heat and cold is over a greater area than the loss to pain. No loss of sense of position; no loss to cotton wool.

 = { Absolute or partial loss of pain.
 Absolute or relative loss to heat and cold
 varies according to intensity of shading.
 x x x = loss of appreciation of heat and cold.

the neighbourhood. He also excluded Raynaud's disease and sclerodactylia, which were suggested as possibilities. Wassermann's test was negative.

Dr. GEORGE PERNET showed a case of *post-operative elephantiasis of the finger*. The patient was a man, aged 75 years, who was operated

on ten months ago for pus about the flexor region (ulnar side) of the left wrist, followed by a deep palmar abscess. On the ulnar side of the wrist, a longitudinal incision was made, and another in the palm, both practically in the line of the left ring finger. Some four months ago this finger began to swell, and it was now much enlarged as compared with the other fingers of the same hand and with the right ring finger. This was aggravated during the recent severe cold weather, the affected finger and the adjacent little and middle fingers becoming very blue, and some ulceration had occurred about the tip of the ring finger. In his opinion, the elephantiasis of the finger was due to the blocking and destruction of the lymphatics, resulting from the deep pus formation. It was comparable with what was observed in the leg, for instance, in some cases of severe old local destructive tertiary syphilis. The patient was shown in connection with the case of Morvan disease described above.

Major GRAY thought that in the second case there was considerable evidence that the ulnar nerve was involved in the scar in front of the wrist, though it was difficult to make certain on a casual examination. He got a shooting pain up the hand over the ulnar area when the scar was pressed upon; there was wasting of the interossei muscles, and diminished sensation over the three inner fingers, especially on their palmar aspect, associated with marked blueness of those fingers. He thought the type of lesion present was therefore comparable with that of the other man, for the lesions occurred only on the partially anæsthetic finger. As to the swelling of the fingers in both cases, he imagined it to be due to a chronic lymphangitis set up by trauma to the skin.

Dr. F. PARKES WEBER remarked that Dr. Pernet's first case was a typical example of what Charcot called the Morvan type of syringomyelia. It would be interesting to examine the neck by X-rays for cervical ribs. He mentioned this because there were various disturbances of nutrition in the hands connected with the presence of cervical ribs. The condition in the hands of this patient was certainly not due to cervical ribs, but cervical ribs had sometimes been found in cases of syringomyelia. The Berlin neurologist, Oppenheim, had drawn particular attention to that fact, and he had gone so far as to suggest there was some indirect ætiological relationship between the two conditions. Perhaps cervical ribs were a stigma of degeneration. He thought it was very unlikely that the swelling of the soft parts of the hands (a kind of "cheiromegaly") in some cases of syringomyelia (*i. e.* in the Morvan type of syringomyelia) was due to chronic septic lymphangitis. He saw cases in Paris in which there was, he thought, no sign of lymphangitis. It was one of the characteristics of the trophic disturbances in the bones and joints and hands and feet sometimes associated with syringomyelia that there was thickening of the parts involved. In that respect they tended to differ from the trophic disturbances of tabes dorsalis.

Dr. PERNET (in reply) said that his view of the second case was that the swelling of the finger was due to blocking of the lymphatics, such as was seen in

a bad case of syphilis, without any interference with nerves at all. This man had good movement at the wrist and hand. The ulnar nerve was not divided transversely in this case. That some filaments were interfered with would explain the diminution of sensation. With regard to the patient with Morvan's disease, he agreed with Dr. Parkes Weber that the whitlows were simply the result of micro-organisms invading a part which was below par.

Dr. GEORGE PERNET showed a case of *Œdème bleu de Charcot*. The patient was a woman, aged 27 years, who was transferred to his department at the West London Hospital from the surgical out-patients. She had first come under Mr. Tyrrell Gray, who had carefully gone into the case, including radiographing, and who brought her to him as not being a surgical case. His diagnosis was *Œdème bleu de Charcot*. The details were as follows: Early in November, 1916, the lower part of the left leg began to swell, and the swelling spread downwards over the dorsum of the foot. When he saw her on February 27th, 1917, the lower half of the left leg and instep of the foot to the roots of the toes were much swollen, blue and œdematous. The œdema did not pit on pressure in the ordinary way, but the pitting rapidly disappeared on removal of the finger, in the manner described by Sydenham, and named by Charcot "elastic œdema." The affected area was exquisitely sensitive to the slightest touch. Stigmata of hysteria, such as the usual tender points and anæsthesia, were not present. Nevertheless he maintained the diagnosis of *œdème bleu*, and on referring to Charcot's lecture* on the subject to refresh his memory he found this case tallied with his description. In one case he mentions, a surgeon, called into a case of this kind involving the right leg and thigh, made two large incisions down to the bones under the impression that it was one of *phlegmon diffus*, so it behoved one to be careful. Charcot looked on this *œdème bleu* as a form of the hysterical œdema originally described by Sydenham (*œdème blanc* Charcot calls it to distinguish it). He put the patient on pil. zinci et belladonæ et assafœtidæ, which happened to be in the West London Hospital pharmacopœia. On March 16th, when again seen, the patient volunteered the statement that the pill had done her more good than anything else she had taken. He might add that to divert her he had also ordered mist. sacchari usti three times a day. That there was some sugges-

* Charcot, *Clinique des maladies du système nerveux*, 1892, i, pp. 95 et seq., with figures.

tion in the matter was quite likely. At any rate the swelling and œdema were much less, the parts not so tender, and somewhat paler in hue. The patient also looked much better.

Dr. F. PARKES WEBER felt very strongly that this was a case of venous thrombosis involving the deeper intramuscular veins in the limb. This view was confirmed by the history of sudden painful onset. He did not think this patient manifested any sign of hysteria. Later on, an elastic, rather hard œdema was apt to develop in such cases, which might ultimately disappear, but might last a long time. In some cases there ultimately supervened in the calf muscles either a real hypertrophy, or a pseudo-hypertrophy due to chronic interstitial thickening of the fibrous tissue. He made some references to the literature of the subject in connection with a case which he showed about seven years ago before the Clinical Section.* The cases which Charcot grouped under the headings *œdème bleu* and *œdème blanc* had been gradually redistributed amongst various groups, according to their supposed ætiology. What Charcot called *œdème bleu* affected generally a hand or foot rather than the limb above. In the present case the leg above the ankle was the part specially involved.

Dr. A. EDDOWES said he had a patient under his care who had one leg in a condition very similar to this patient's. She was a nurse who came from France, where she had been much exposed to cold. She had been liable to chilblains. The first time he saw her, her leg was very much swollen and almost blue, also tender, very similar to the condition in this case.

Dr. W. KNOWSLEY SIBLEY showed a case of *Tuberculosis cutis in a patient with phthisis*. The patient, a well-developed Frenchman, aged 30 years, was a tool-maker by occupation. He presented himself to the French Army in November, 1914, but was rejected because of active phthisis at the right apex, of which he was unaware. A few weeks before that date he developed a warty condition on the dorsum of the left hand and the little finger of the right. The point that interested him in the case was the connection between the Tuberculosis cutis and the phthisis. A certain proportion of lupus cases, sooner or later, suffered from phthisis, but in his experience they did not come across many cases of phthisis which develop lupus. He presumed that this patient had his phthisis before he had his lupus. Owing to his occupation, this man was perpetually injuring his hands, therefore he would be much more liable than other persons to inoculate himself with his own tubercule bacilli.

* F. Parkes Weber, "Apparent Muscular Hypertrophy following Œdema of the Left Leg, due to Venous Thrombosis," *Proc. Roy. Soc. Med.*, 1909, ii (Clin. Sect.), p. 60. According to Geipel (at the Gesellschaft f. Natur- und Heilkunde zu Dresden, March 23rd, 1912) the deep-seated veins of the calf are not rarely the only veins in the body to be affected by thrombosis. The diagnosis of thrombosis, owing to absence of the ordinary signs, in such cases may be very difficult.

CURRENT LITERATURE.

INFLAMMATORY AFFECTIONS.

LICHEN PLANUS ACCOMPANIED BY BLEB FORMATION. D. W. MONTGOMERY, M.D. (*Journ. Cut. Dis.*, 1916, October, xxxiv, 748.)

THE patient was an elderly man suffering from typical Lichen planus of the body, limbs, and mouth. Associated with the Lichen planus papules on the legs were a great number of blebs, which varied considerably in size from half a hen's egg to a small blister. These lesions seemed to arise as blebs from the skin with little inflammatory reaction, and could not be made out to develop from pre-existing papules; the contents were serous, some being purple, others citron-yellow. There was little itching associated with it. J. M. H. M.

STUDIES ON A CASE OF IDIOPATHIC PURPURA HÆMORRHAGICA. G. R. MINOT, M.D. (*Amer. Journ. Med. Sci.*, 1916, vol. clii, p. 48.)

THE case of a Russian Jewess, who succumbed to this disease after a course of thirteen months, in spite of eleven transfusions of blood and injections of thromboplastic substances, is recorded in considerable detail, as are also the very thorough hæmatological investigations which were carried out. These investigations showed the main abnormality to consist in a remarkable diminution in the platelet count, which was temporarily increased by transfusion of blood, only to fall rapidly again in a few days. A secondary anæmia was present, which the author attributes to hæmorrhage, the evidence against an "aplastic" anæmia being the presence in the blood of numerous reticulated red cells and the absence of leukopenia or marked lymphocytosis; there was also no evidence of red cell destruction in the urobilin content of the stools. Coagulation time was usually delayed, but did not show any marked variation with the platelet count. The "bleeding time," however, varied inversely with the number of platelets present, thus confirming Duke's observations. The author concludes that the low platelet count is probably due to one or both of the following factors: (1) Some reaction (presumably a specific poison) taking place in the body which destroyed the platelets as fast as they were formed. (2) A localised aplasia of the platelet-forming elements of the marrow which might have been due to some toxic phenomena. This destructive process, perhaps toxic, anaphylactic, or of some other nature, seems to have been specific because none of the other blood elements were involved. A. M. H. G.

PERLÈCHE: ITS BACTERIOLOGY, SYMPTOMS, AND TREATMENT IN TWO HUNDRED AND TWENTY-THREE CASES.

ARTHUR L. SMITH. (*Archives of Pediatrics*, April, 1917, p. 274.)

OF 1211 children examined by the author during the last three years, 287 were infected with perlèche in some stage of its development. It was found sixteen times in adults, and of this number seven were dispensary assistants, who were intimately in contact with the disease. The ætiology of perlèche has been the subject of much controversy. Lemaistre believes an anaerobic streptococcus to be the exciting organism; while Raymond, Planche, and others, having isolated the *Staphylococcus aureus* and *albus* from the lesions, assign the cause to these organisms.

The author isolated the anaerobic streptococcus in pure culture in 135 cases of his series of 223 cases in an early stage of the disease. The same organism was found in combination with the *Staphylococcus aureus* twenty-six times, seven times with the *Staphylococcus albus*, and fourteen times with the *Streptococcus pyogenes*. In the later stages of the disease the anaerobic streptococcus was not found at all, but the *Staphylococcus aureus* was found alone thirty-six times, and was associated three times with the *Streptococcus hemolyticus*. The author inoculated the corners of his own mouth with the anaerobic streptococcus six times, and each time the characteristic lesion appeared within seventy-two hours, and the organism inoculated was isolated on every occasion. The ages of the children affected varied from six months to fourteen years; all lived in ill-ventilated houses with insanitary surroundings. Perléche is more prevalent during the colder months, 73 per cent. of the cases having been affected during the winter season. It is secondary to those abnormal conditions about the oral cavity which cause an increase in the salivary secretions—*e. g.* acute and chronic infections of the nasal cavity and its accessory sinuses, the naso-pharynx, the pharynx and tonsils, stomatitis, glossitis, gingivitis, Pyorrhœa alveolaris, decayed teeth with lacerations of adjacent soft tissues, the "teething period" in infants, etc. The writer insists on the importance of the increased flow of saliva in the ætiology of the affection; the continuous bathing of the epithelium causes maceration of the tissue and forms a favourable port of entrance for the exciting organism. He has not seen this infection co-existing with Alopecia areata as reported by Hyde. In all his cases the Wassermann reaction and the luetin test were negative. He describes three stages of the disease and discusses the differential diagnosis from Impetigo contagiosa and syphilis. The treatment which gave the best results was by painting the lesions with a 50 per cent solution of silver nitrate and, when dry, applying Lassar's paste. If the lesions do not disappear in a few days, spirits of camphor or alcohol may be used. Belladonna may be required to control the salivary secretion and a weak solution of perchloride of mercury, followed by ammoniated mercury ointment, when pus infections are present.

S. E. D.

ATROPHIES.

A UNIQUE CASE OF ATROPHY OF THE FATTY LAYER OF THE SKIN. T. C. GILCHRIST, M.D., and L. W. KETRON, M.D. (*Journ. Cut. Dis.*, 1916, October, xxxiv, p. 728.)

THE case here recorded was that of a girl, aged 8 years, who presented a peculiar condition of the skin of the legs, extending from the inguinal region to the ankle, the most striking feature of which was a distorted contour of the legs, visible even with the stockings on, due to areas which were apparently sunken below the normal level of the skin. The skin over these atrophic areas presented a dusky bluish tint. On the thighs were small depressed macules and the larger sunken morphea-like patches, while on the legs were palm-sized atrophic areas which spread with a smooth or serpiginous border, which was indurated, pinkish-yellow, and covered with a few thin white scales.

A histological examination was made of a small early nodule, which was felt beneath the skin, but was invisible on the surface, and of a piece of tissue excised from one of the large patches on the leg. It was found that the lesions were the

result of the formation in the fatty layer of the skin of small nodules or strands, which were not perceptible to the naked eye, but were found only on deep palpation. These nodules were made up of cells of a chronic inflammatory type, the inflammatory process spreading only in the fatty layer, the fat itself being taken up in the cytoplasm of the peculiarly large phagocytic cells. These phagocytes, or macrophages, appeared to take up the fat from the subcutaneous tissue, which had undergone some change, and was probably liberated in some soluble inert form which could be excreted through the blood and lymph channels. After the fat had disappeared the inflammatory reaction was replaced by a fibrous tissue, which itself gradually disappeared, leaving the skin normal with the exception of the absence of the fatty layer. The phagocytes seemed to be derived from the fixed connective tissue cells and the endothelium of the capillaries. These phagocytes were similar to xanthoma cells, but in xanthoma the foreign material which becomes the fat in the cells occurs in the blood as a cholesterol-fatty-acid-ester, while in the case described above the foreign material was probably formed *in situ* from the normal fat.

The paper is illustrated by photographs of the clinical appearances and of the histological changes. J. M. H. M.

NEW GROWTHS.

PAGET'S DISEASE OF THE NIPPLE. (Abstract of a Hunterian Lecture delivered before the Royal College of Surgeons of England on February 16th, 1917.) W. SAMPSON HANDLEY. (*Lancet*, April 7th, 1917, p. 519.)

THE author dismisses the view that there is any real connection between Paget's disease and squamous carcinoma of the nipple, and shows that the surface epithelium is not the seat of any malignant change. Accepting Thin's view that Paget's disease results from a pre-existing carcinoma of the ducts, he shows how his own work on lymphatic permeation explains the skin changes which are due to blocking of the lymphatic vessels by the extension of carcinomatous growth along the ducts causing lymphatic œdema of the skin. Since the publication of his researches on the dissemination of carcinoma by lymphatic permeation in 1904 the author has taken every opportunity of examining cases of Paget's disease, but it was not until after twelve years that he met with an early example which proved his contention and showed a perfect and nearly complete permeation of the lymphatic vessels of the "eczematous" area of skin. This case he describes in detail. The correct treatment is the complete operation for cancer of the breast. The writer's impression is that duct-carcinoma has a rather more favourable prognosis than carcinoma of the breast in general, and that it affects the axillary glands rather late. S. E. D.

TREATMENT.

THE TREATMENT OF BURNS BY PARAFFIN. Lieut.-Col. A. J. HALL. (*Brit. Med. Journ.*, January 13th, 1916, p. 37.)

Dr. SANDFORT introduced a treatment for burns by means of a preparation of paraffin which he called ambrine. The treatment consisted in washing the burns with sterile water, drying, and painting or spraying a layer of ambrine over the surface. A thin layer of wool was then applied and a second coat of paraffin over

this. The paraffin solidifies almost instantaneously, and a thicker layer of wool and a bandage are then applied. Ambrine is a secret preparation, the property of the Ambrine Company, Paris. Observations and experiments with ambrine, carried out in a military hospital, gave the impression that the treatment was valuable. Burns healed with rapidity; constitutional symptoms rapidly abated; pain was reduced to a minimum; scarring appeared to be obviated, and the need for grafting large burns was avoided. The patients were singularly free from sepsis, and severe cases recovered who would not have been expected to recover when other methods were used. Observers who had had large experience of burns treated by picric acid, ointments, and other methods in ordinary use, were unanimously of opinion that the paraffin method was superior to the older methods. The experience of those who had witnessed the results of burns after liquid fire attacks was that the ambrine treatment would save many lives and accelerate the recovery of all burns.

A preparation resembling ambrine may be produced by impregnating hard paraffin with a small quantity of tar. The substance is not in very good solution and falls to the bottom of the paraffin when the wax is heated. The excellent results obtained would therefore appear to be due to mechanical causes. Protection from the air, protection of the newly-formed granulations from damage, the splint-like effect of the wax in holding the damaged tissue immobile and at rest, appear to be the factors which produce the effect.

The writer made experiments to determine whether equally good results could not be obtained with commercial paraffin, section wax or similar pure hard paraffin. Ambrine has a lower melting point than ordinary section wax, it is much more plastic when cooling, and has not the tendency to crack possessed by ordinary hard paraffin. Hard paraffin lacks the flexibility and adhesiveness of ambrine, but the author found that if it was subjected to a temperature of 130° C. by means of superheated steam the melting point was reduced about 2° C., and the substance now possessed the mechanical and therapeutic properties of ambrine. The clinical results of the application of hard paraffin—treated with superheated steam—to burns were indistinguishable from those of ambrine, but better results were obtained by the addition of certain antiseptic and stimulating substances. After numerous trials a preparation, known as No. 7 paraffin, was arrived at, consisting of resorcin 1 per cent., oil of eucalyptus 2 per cent., olive oil 5 per cent., soft paraffin 25 per cent., hard paraffin 67 per cent. The directions given are to melt the paraffin durum and add paraffin molle and olive oil. Dissolve the resorcin in absolute alcohol, add the alcoholic resorcin, and lastly, add the eucalyptus oil when the wax has cooled to about 55° C.

Difficulty having been experienced in obtaining resorcin in large quantity, beta-naphthol has been substituted in more recent preparations, as follows: Beta-naphthol 25 per cent., eucalyptus oil 2 per cent., olive oil 5 per cent., paraffin molle 25 per cent., paraffin durum 67.5 per cent. No. 7 paraffin was also successfully employed in certain stages of trench feet. S. E. D.

A RECORD OF SIXTY-ONE CASES OF NEOPLASMATA OF THE SKIN TREATED BY X-RAYS OR RADIUM. A. A. RUSSELL GREEN. (*Lancet*, April 7th, 1917, p. 544.)

THE writer's conclusions are that: (1) The administration of radium in less than one-hour doses of the strength specified is likely to prove unsatisfactory.

PATHOLOGY.

- Anaphylactic and Pseudo-anaphylactic Skin Reactions**, The Mechanism and Clinical Significance of. J. A. KOLMER. (*Johns Hopkins Hosp. Bull.*, May, 1917, vol. xxviii, No. 315, p. 16.)
- Bacteria**, The Life-History of. EDWARD C. HOW. (*Brit. Med. Journ.*, May 5th, 1917, p. 571.)
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- Effect of Soap on Treponema Pallidum**. M. A. REASONER. (*Journ. Amer. Med. Assoc.*, March 31st, 1917, vol. lxviii, No. 13, p. 973.)
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BOOK RECEIVED.

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PERSONAL NOTE.

PROFESSOR J. JADASSOHN of Berne has been appointed to the Chair of Dermatology at Breslau in succession to the late Professor A. Neisser.

DEATH.

We regret to record the death of Professor Caesar Boeck of Christiania.





Plate I.—Painting of buttock showing ecthyma and one warty growth secondary to ecthyma.

TO ILLUSTRATE MAJOR MACCORMAC'S ARTICLE ON SKIN DISEASES AND
THEIR TREATMENT UNDER WAR CONDITIONS.

THE BRITISH JOURNAL OF DERMATOLOGY AND SYPHILIS.

JULY—SEPTEMBER, 1917.

SKIN-DISEASES AND THEIR TREATMENT UNDER WAR CONDITIONS.*

By HENRY MacCORMAC, M.D., F.R.C.P., MAJOR R.A.M.C. (T.C.)

WAR is a very serious business in which every detail counts towards the final triumph of victory. Essential above all things is the maintenance of man-power; every soldier unfit for the firing line is a gain to the enemy, and for military purposes it matters not what removed him from the line, only that he has been removed. In the present war the losses occasioned by diseases of the skin have been considerable, and therefore we, as dermatologists, are much concerned with two questions: First, whether our art can prevent them, and second, when they have arisen how we can best cure them.

In France the problems presented are new, unusual types of skin affection have arisen, while the progress of war, the environment of an army in the field, its ebb and flow, and the complicated movements of its being, renders impracticable those processes familiar in the quiet habit of civil life.

Humanitarian principles compel us, and rightly, to give our best aid to those who, by reason of grievous wounds or severe sickness can never more fight. In dealing with diseases of the skin, we are content to know that not only are we alleviating illness, but, further, since nearly every case will return to duty, we are able to add

* Paper read before the Section of Dermatology, Royal Society of Medicine, on April 19th, 1917.

considerable reinforcements to the Army. We are dealing with men whose health is but little impaired, many of whom are highly-trained soldiers, and who from a purely military point of view are of the utmost value to the combatant forces. I particularly desire to emphasise this point because it is so necessary to insist that the employment of the highest skill and the best methods are well repaid by the results obtained.

The work of a dermatologist is important for a further reason. Where so large a proportion are affected with contagious disease, the cure of one case may mean the prevention of many others.

The problem is no new one; in the medical history of past campaigns we may read how severe and extensive skin complaints were. During the American Civil War, out of an army of some 600,000 men, 32,000 cases were diagnosed as itch, and another 35,667 were merely recorded as skin disease. So severe was the former complaint that its pathology was much disputed at the time.* During the Napoleonic campaign cases of itch were counted by the hundred thousand,† and in his admirable observations on diseases of the army in camp and garrison Sir John Pringle refers to its existence in his time.‡ And so the tale goes on through the New Zealand and South African Wars.

We have therefore sufficient precedent to compel us to consider the problem seriously, evidently no light one. In the past typhus and typhoid played frightful havoc in field and camp; these diseases medical science has curbed—a triumph amply recognised—the scourge of scabies still, however, survives to the present time.

With such evidence before us, from both the past and present, it is, I think, apparent that the scope of dermatology in war is considerable, and not in our Army alone but in those of our Allies also. At the commencement of hostilities the Belgian Army suffered considerably from itch. M. le Médecin Principal Dupont tells me that this has been very largely checked, no doubt in consequence of an admirable bathing system and the establishment of dermatological centres in various sections, where expert opinion and treatment is

* Manson's *Military Hygiene*, London, 1901, p. 606.

† Hirsch, *Geographical and Historical Pathology*, ii, p. 360 (New Sydenham Society's translation).

‡ Sir John Pringle, *Observations of the Diseases of the Army in Camp and Garrison*, London, 1752, chap. viii.

available. Where troops are moving forward rapidly over contested ground, such fixed arrangements are hardly practical.

In Paris, the Director of St. Louis Hospital assured me that the incidence of scabies in the troops has been greatly lessened since the beginning of the war. The French Army has also fixed dermatological centres. So far as could be observed, the cutaneous affections amongst French soldiers were less severe than those seen in our troops, probably as the result of these arrangements.

In the British Army at the Front, a man reporting sick comes under his own medical officer, by whom he may be evacuated to a field ambulance, thence to a casualty clearing station, or base hospital. The question arises where skin complaints can be most efficiently dealt with, and this demands consideration from several points of view. The regimental Commanding Officer is naturally loth to lose a soldier suffering from what appears to be a trivial complaint; but since regimental treatment cannot be efficient under war conditions, and as the danger of infecting other men is considerable, it may, I think, be very definitely ruled that it should never be attempted.

What plan can be followed? Obviously, the best results are to be got in fixed institutions with expert *personnel*. Now, from their nature and purpose neither field ambulances nor casualty clearing stations come under this heading. On the other hand, a scabies station for each army corps would fulfil these requirements admirably. It is argued against the establishment of such units that this means the unnecessary creation of new hospitals to which medical officers and quartermasters would have to be detailed. Those who reason in this manner overlook the fact that these stations would release beds and *personnel* elsewhere employed in the treatment of skin diseases, and that since each medical officer can deal with a large number of skin cases an actual saving would be effected. They forget that skin patients must be housed and treated somewhere; they doubtless fail to appreciate that special departments make for speedy cure. I submit the argument, then, that corps scabies stations would both shorten treatment and effect a saving of *personnel*, two points which, if sustained, are very worthy of consideration.

The adoption of such a system would not end the administrative difficulties. To attain the best results, it is essential that early cases

be selected. I suppose hardly any battalion is completely free from itch. Regular medical inspection is necessary, often most difficult to arrange. Since scabies in France differs in some important features from the form seen in civil life, medical officers must know what to look for. The hands are often entirely free from lesions, while interdigital burrows, that pathognomonic sign, are only present in about 13 per cent.—this figure was obtained by Capt. Small, R.A.M.C., in an examination of sixty consecutive cases.

The problem is further complicated by the presence of lesions and itching caused by pediculi. The louse-bitten soldier regards pruritis as a normal accompaniment of his life. I have been amazed whilst watching a stream of men passing through divisional baths to observe how extensively their bodies were covered with numerous red papules produced by this insect. No, or hardly any, secondary scratch marks so characteristic of the phthiriasis of hospital out-patients are seen. The pediculosis is acute rather than chronic, and presents a close resemblance to scabies, at times most puzzling. Fortunately the louse, so far as I know, never attacks the penis, while this organ is frequently affected in scabies, and the presence of papules or crusts there is of the greatest help in forming a diagnosis.

These difficulties in diagnosis have occasionally led to the most amazing errors. I have seen vaccines given for long periods—up to six months—for the complications of unrecognised scabies; I have seen opium given to relieve its itching; I have even seen lesions burnt out with solid silver nitrate. In this I do not think medical officers are altogether to blame. Text-book descriptions are misleading when applied to the disease as seen in France. Even so distinguished an expert as Dr. Adamson in a recent paper* lays stress upon itching, a symptom sometimes of little account, and interdigital burrows, a sign frequently completely absent.

Any system of regimental inspection, for the detection of scabies, must permit of an examination of the whole body and above all of the penis. Interdigital vesicles rather than burrows should be sought for; impetigo of the buttocks is pathognomonic of scabies, and every patient with boils should be regarded as suspicious, as they form 28·4 per cent. of the pyodermic complications, either alone or associated with impetigo.

* H. G. Adamson, *Lancet*, 1917, i, p. 221.

The treatment of scabies opens a wide field for discussion. In this, prevention is of primary importance, and demands some comment. How does a soldier acquire this disease? Dermatologists insist that prolonged and intimate contact is necessary. Since opportunities for removal of clothing are comparatively rare and offer themselves only when in rest, infection must occur at this time, and as it is then that blankets are chiefly used, reason points strongly to them as the means of transmitting the disease. This argument is strengthened by the history of epidemics amongst officers occupying the same dug-out. No doubt horses and a venereal origin account for some cases—a small and negligible class.

It is perhaps a counsel of perfection, but were it possible to disinfect blankets more frequently, using, for example, the Clayton sulphur vapour method, one is tempted to believe that scabies would be greatly lessened.

Another source of infection—viz. the importation of fresh cases from England or the base—merits some passing reference. The watchful draft-inspecting medical officer soon catches and removes these men, but he is powerless to deal with the scabies “carrier,” the individual who has been partially cured by methods such as sulphur fumigation. In spite of the luke-warm reception accorded to this method of treatment by this Section, it has a considerable vogue and enjoys an undeserved popularity. In the discussion to follow, I hope speakers will express their experience and views of this treatment and its modifications.

Military authorities are well aware of the losses occasioned by itch. In Base Hospital B it has been found that when severe pyodermic infections have occurred a patient remains under treatment on an average 31·7 days. This does not include additional time spent in other hospitals and in transport.

These complications are so severe as to suggest the presence of an unusual type of acarus. Specimens were sent to the British Museum. Mr. Hirst very kindly examined them for me; he reports that “The examples certainly seem to belong to the human variety. The size is quite typical, and also the structure of the dorsal scales, which are longer than wide and acutely pointed, instead of being rather shorter and blunter as in var. *equi*.”

Chart I illustrates the more important admissions of skin-diseases

into Hospital B from August to January inclusive. Especially striking is the curve of the impetigo; note should also be taken of the similarity between this curve and those of boils, scabies, dermatitis

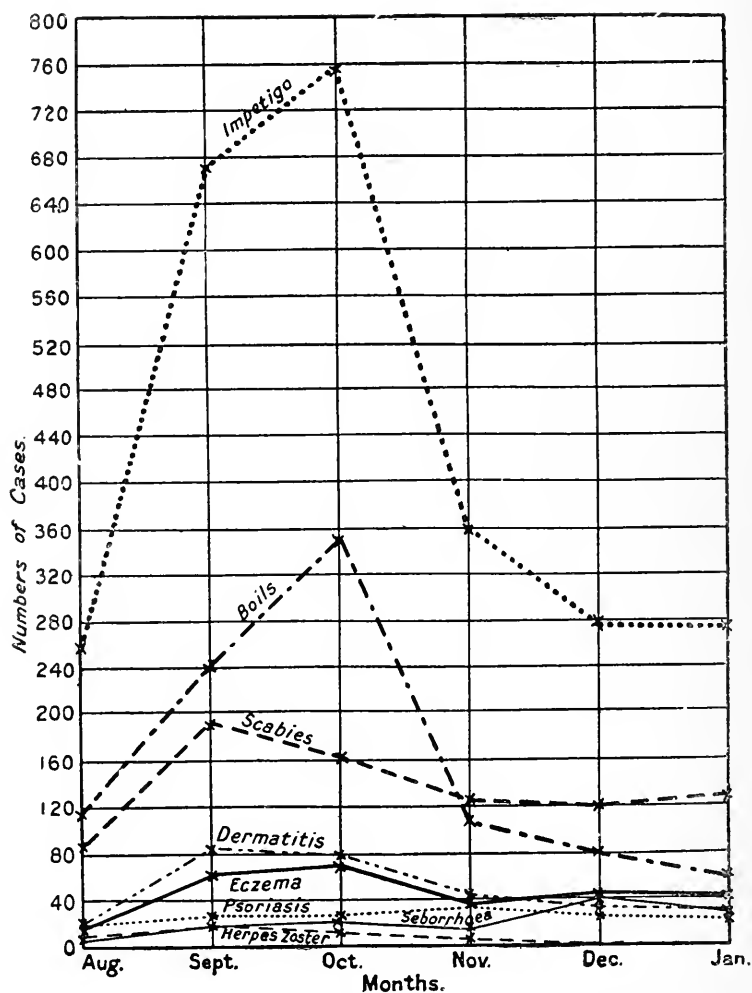


CHART I.—Admissions to Hospital B, representing graphically the more important groups.

(unclassified), and eczema. The rise corresponds with, and to a large extent results from, the offensive of last summer. I have, however, shown it for other reasons. When examined in conjunction with Chart II it can be seen what an important part scabies and its com-

plications play in the causation of skin-disease in the Army. Chart II represents graphically the analysis of 1000 cases, diagnosed as scabies, boils, or impetigo—diseases that are responsible for by far the greater number of admissions. Of these, 65.9 per cent. can be directly attributed to scabies. From this it follows that if it were possible to prevent or give early treatment to this disease, a very large number

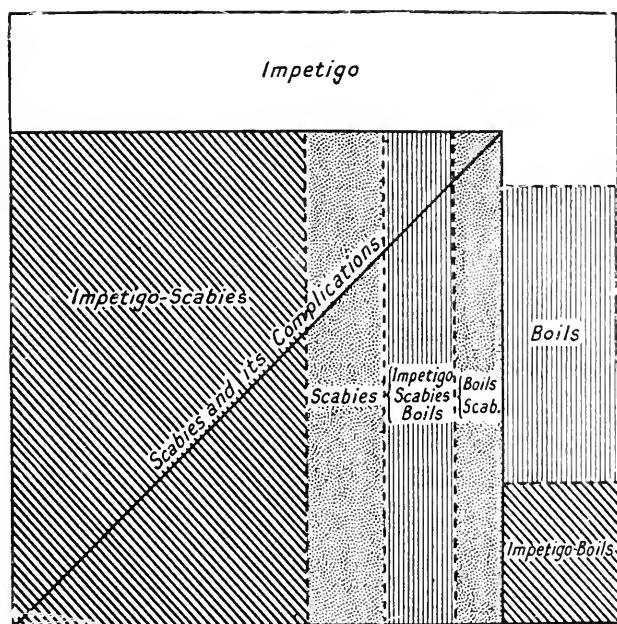


CHART II.—Analysis of 1000 cases diagnosed scabies, boils, or impetigo.

of beds would be free for other purposes, and this holds true of very many hospitals both at home and abroad.

Opinion is not unanimous as to the best method of treating itch. Under conditions of active service, that is best which is most suitable for the majority, most easily carried out, and least expensive.* Any system to be effective must fulfil three conditions: burrows must be opened to permit access of the parasiticide to the insect and ova; the parasiticide should be of such a nature as to destroy the parasite without producing dermatitis; finally, to prevent reinfection, contact

* Ungt. β -naphthol co., 2 oz., cost 2½d.; Balsam of Peru, 2 oz., cost 1s. 2½d.; Ungt. sulph., 2 oz., cost 1½d.

clothing and blankets must be disinfected. The first of these conditions is achieved by a hot bath, soap, and a soft brush; the second by the application of sulphur ointment twice daily for three consecutive days; and the third by means of any steam pressure or sulphur vapour apparatus. In this, as in any other system, to be effective it must be thoroughly and conscientiously carried out. Showers and steam baths are unsatisfactory and almost useless. I have seen men coming from them with vesicles unopened. The sulphur is blamed for the inevitable failure in cases treated in this manner. To attain success, the ointment must be thoroughly rubbed in over the whole body below the neck. I have seen men applying it with trousers, puttees, and boots still on, and again the failure is attributed to the application. For these reasons it is necessary for the soaping and the application of sulphur ointment to be superintended by a medical officer, or carried out by a skilled orderly.

Where pyodermic complications are so common, care must be taken to prevent cross-infection. Each man should have a separate portion of ointment. This is best arranged on a wooden shelf, beside which the patients stand. The following photograph illustrates this point (Fig. 1).

Many other remedies have been used, such as balsam of Peru, β -naphthol, etc. None is universally satisfactory; some are too costly, others produce dermatitis, and for general use I do not think any plan superior to the one outlined—an old, but a satisfactory method of treatment.

Experts are aware of the facts, but they are often overlooked by others, that many of the lesions of scabies still persist at the end of treatment, and that the remedy employed may itself occasion some slight degree of itching. Discovery of the *acarus* is the only absolutely certain proof that a man is still uncured. This test is useless when applied to the type met with in France, for the *acarus* is extraordinarily difficult to find, even in well-marked untreated cases.

If these facts were more widely known, cured men would not be returned to hospital for further treatment, as so frequently happens; and the practice of continuing the application of sulphur ointment for days, or even weeks, under the mistaken idea of obtaining a more thorough cure, would cease.

Brief reference should be made to the impetigo associated with

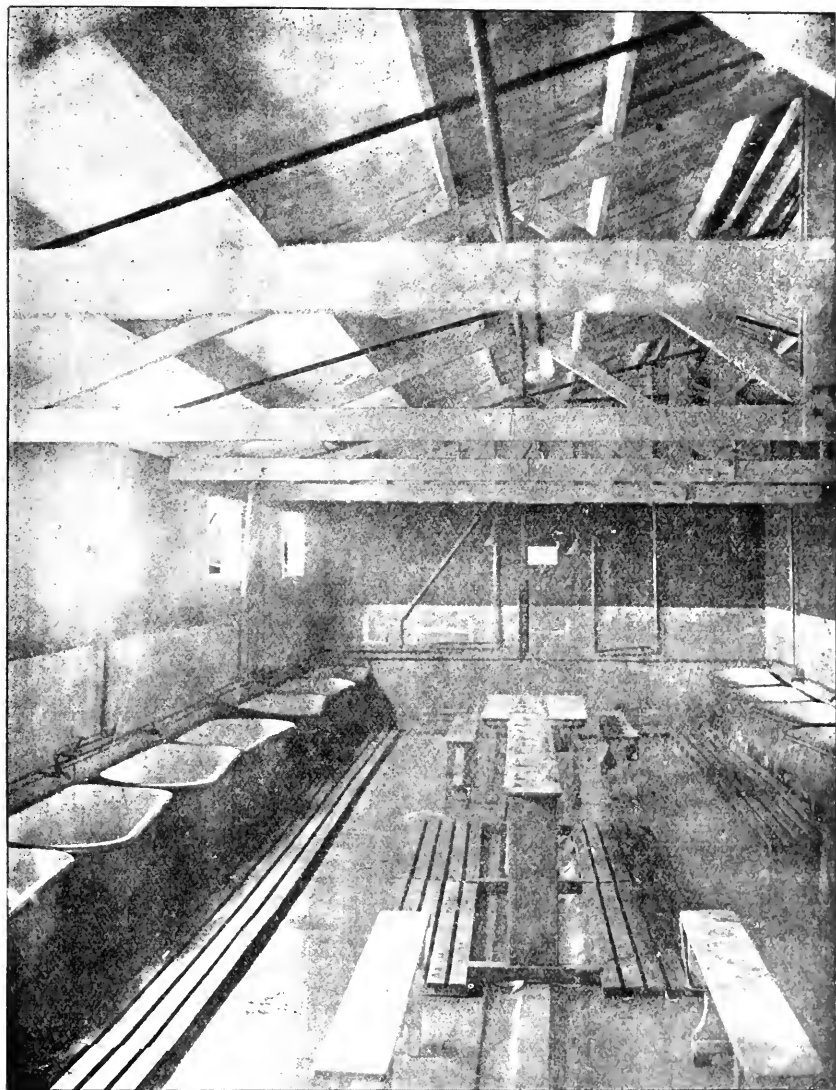


FIG. 1.—Treatment-room for scabies.

TO ILLUSTRATE MAJOR HENRY MACCORMACK'S ARTICLE ON SKIN-DISEASES
AND THEIR TREATMENT UNDER WAR CONDITIONS.

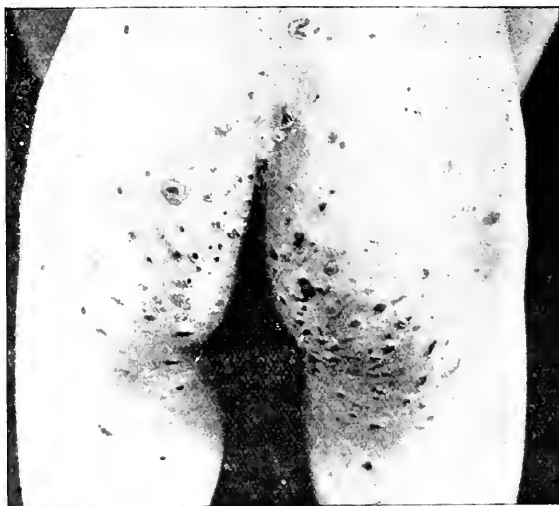


FIG. 2.—Photograph illustrating characteristic buttock distribution of impetigo, secondary to scabies.



FIG. 3.—Ecthyma—active lesions and pigmented areas.

scabies. Its distribution on the buttocks (Fig. 2), and frequently over the elbows and knees, is very characteristic. This impetigo is of an ecthymatous type, and is caused by streptococcal infection; it is relatively common. Those unfamiliar with it are apt to overlook the primary scabies, which may be of slight degree. Its presence in no way contra-indicates sulphur treatment, which, indeed, often acts most beneficially. After the scabies has been cured, the same treatment is followed as for ecthyma elsewhere.

OTHER SKIN-DISEASES.

Skin-disease during war is not entirely made up of scabies and its complications; where large bodies of men are engaged it is natural to expect that other types, both common and rare, will be met with. The two following tables show the admissions into Hospitals A and B where I have worked. The high figure given for impetigo is somewhat misleading, since it includes impetiginisation following scabies and seborrhœa. I do not suppose among the 5000 odd cases there have been fifty instances of true Impetigo contagiosa.

TABLE I.—ADMISSIONS TO HOSPITAL A.

	1915.					1916.			Total.
	Nov.	Dec.	Jan.	Feb.	Mar.	April.	May.	June.	
Impetigo	122	172	151	161	220	170	147	116	1259
Boils	24	59	50	51	42	36	65	48	375
Scabies	95	770	170	8	25	5	9	23	1105
Dermatitis	7	10	10	11	11	8	8	7	72
Psoriasis	11	24	17	17	29	21	36	29	184
Seborrhœa	8	12	13	11	40	18	18	11	131
Eczema	7	22	18	11	37	22	33	31	181
Pediculosis	—	17	62	69	36	3	5	6	198
Erythema	3	7	5	—	4	1	—	1	21
Ecthyma	—	—	1	2	—	—	—	—	3
Pityriasis rosea	3	2	2	5	3	2	2	3	22
Folliculitis	1	11	13	9	8	2	5	1	50
Urticaria	2	4	3	3	2	11	8	1	34
Herpes zoster	2	2	2	—	3	3	1	—	13
Ichthyosis	—	—	1	—	—	—	—	1	2
Acne	6	22	19	12	8	6	10	7	90
Sycosis	4	2	4	1	3	2	5	7	28
V. D. S.	8	13	4	3	6	4	17	16	71
Carbuncle	2	4	3	1	4	2	1	2	19
Lichen planus	—	—	1	1	—	—	1	—	3
Sudamina	—	—	—	—	—	—	—	2	2
Erythema nodosum	—	—	—	—	—	—	—	2	2
Lupus	—	—	2	—	—	3	2	2	9
Erysipelas	—	—	—	—	1	—	1	2	4

The primary impetigo corresponds to an ecthyma, in the sense employed by Sabourand—*i. e.* a dermic impetigo, of severe type and long duration. The legs and thighs are most frequently involved; sometimes the disease is very widespread, almost universal. The elementary lesion consists of an ulcer, often astonishingly deep, covered over by a thick black crust; if this be pressed upon pus can be freely squeezed out along the edges. A surrounding red halo marks the active extension of the process; indeed, when the crust has been removed a platinum loop can usually be passed under the skin for some distance, and this undermining makes treatment particularly difficult.

TABLE II.—ADMISSIONS TO HOSPITAL B.

	1916.					1917.			Total.
	Aug.*	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	
Impetigo	268	729	849	388	305	287	444	655	3925
Boils	129	258	396	116	85	62	130	168	1344
Scabies	92	223	201	54	135	143	183	161	1192
Dermatitis	21	91	92	54	44	42	67	61	472
Psoriasis	24	40	34	41	38	32	52	46	307
Seborrhoea	7	24	25	19	43	34	70	69	294
Eczema	22	69	83	41	18	52	62	76	453
Pediculosis	8	14	8	14	13	8	14	4	83
Erythema	—	3	2	8	2	5	1	1	22
Ecthyma	—	—	2	3	3	—	1	3	12
Pityriasis rosea	—	2	9	2	4	1	—	3	21
Folliculitis	—	1	1	—	1	2	1	2	8
Urticaria	3	9	11	15	5	6	5	2	56
Papular urticaria	2	—	—	1	—	2	—	—	5
Herpes zoster	11	20	19	6	2	3	8	8	77
Ichthyosis	—	—	—	4	1	3	5	3	16
Aene	4	10	11	6	7	5	9	7	59
Sycosis	3	11	5	3	4	10	5	9	50
V. D. S.	5	9	8	3	6	11	6	7	55
Carbuncle	22	26	43	6	1	—	1	6	105
Lichen planus	1	1	—	1	—	—	—	—	3
Sudamina	—	—	—	2	—	—	1	—	3
Lupus vulgaris and scrofuloderma	2	2	2	2	—	2	3	2	15
Erysipelas	—	—	2	—	—	—	—	—	2
Ringworm	4	1	1	1	3	5	5	5	25
Hyperidrosis	2	1	—	—	—	—	—	—	3
Hyperkeratosis— palm	1	—	—	—	—	1	—	—	2
Rosacea	1	—	—	—	—	1	—	—	2
Alopecia	—	—	1	—	—	—	1	—	2
Lupus erythema- tosis	—	—	—	1	—	—	1	—	2

* From August 9th.



FIG. 4.—Ecthyma.



FIG. 5.—Ecthyma—uncured after sixty days in hospital.

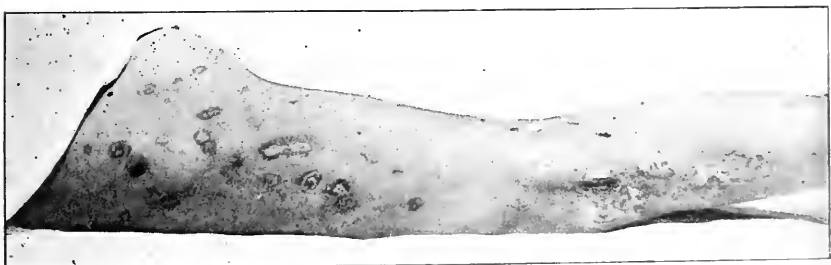


FIG. 6.—Ecthyma—late stage, showing pigmentation and scarring.

TO ILLUSTRATE MAJOR HENRY MACCORMAC'S ARTICLE ON SKIN-DISEASES
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FIG. 7.—Warty condition following ecthyma.



FIG. 8.—Photograph showing result of attempt to imitate ecthyma.

TO ILLUSTRATE MAJOR HENRY MACCORMAC'S ARTICLE ON SKIN-DISEASES AND THEIR TREATMENT UNDER WAR CONDITIONS.

From the lesions it is possible to obtain a streptococcus, usually with ease, and, as might be expected, this is of the *faecalis* type. Capt. Henry, R.A.M.C., kindly examined strains from three different cases.

In Cases 26 and 28 two varieties of streptococci were found. Below are given their cultural characters :

			Broth.		Agar.		Milk.
26	{ Type A	.	Turbidity	.	Diffuse	.	A.
	{ Type B	.	Flocculent	.	Diffuse	.	A and C.
27	.	.	Turbidity	.	Diffuse	.	A and C.
28	{ a	.	Turbidity	.	Diffuse	.	A and C.
	{ b	.	Flocculent	.	Diffuse	.	A (and C).

On sugars the following reactions were obtained (five days' growth) :

		Saccharose.		Lactose.		Raffinose.		Inulin.		Mannite.
26a	.	++	.	++	.	++	.	-	.	(+)
26b	.	++	.	++	.	+	.	-	.	++
27	.	++	.	++	.	-	.	-	.	+
28a	.	++	.	++	.	(+)	.	-	.	+
28b	.	++	.	++	.	(+)	.	-	.	++

These reactions correspond to the *faecalis* type, and exclude such forms as pneumococcus or *pyogenes*.

The following series of photographs illustrate fairly well the more typical forms of this primary ecthyma.

The first shows both active lesions and pigmentation about the knee. Onset six weeks before admission ; another forty-one days in hospital were required to effect a cure (Fig. 3).

The second illustrates the condition as met with on admission to hospital, the disease having been present fourteen days. Extensive crusted lesions are shown, and the erythematous halo is visible around the more active sores. This man was cured after twenty-nine days in hospital (Fig. 4).

The third case, although apparently similar to the previous one, shows how resistant the disease may sometimes be. The patient remained sixty days in hospital and was then evacuated to England, still uncured. The reason for the obstinacy of some cases I have been unable to determine (Fig. 5).

In many cases marked pigmentation, and often scarring, are left behind. This is shown in the following photograph, taken when the disease had been present six weeks, and two weeks before complete cure (Fig. 6).

Not infrequently the disease is followed by papillomatous or warty

growths having a slight resemblance to verrucose tuberculosis; a photograph of this condition affecting the knuckle (Fig. 7), and a painting of a similar lesion on the buttocks (Plate I), are shown.* These growths may occur after any form of ecthyma, either primary or secondary to some other condition, such as scabies, as in the painting. They are not uncommonly found on the eyebrows, neck, or chin, following impetiginised seborrhœa in those situations.

The next three paintings serve further to illustrate the appearances of ecthyma. They show healing lesions with pigmentation (Plate II), a recent sore surrounded by an angry halo, indicating progressive streptococcal undermining of the adjacent skin (Plate III), and an intermediate stage where the process has been arrested, the halo then fading to a dark purple-red colour (Plate IV).

The above series of photographs and paintings serve to indicate the course and aspect of primary ecthyma. Since it originates on the legs, and is associated with *Streptococcus faecalis*, it is justifiable to assume that it begins by some slight abrasion or scratch becoming infected with soil or water which has been contaminated with excrement. It would appear to be rare among troops fighting in the clean sand of the desert. Capt. Barber, R.A.M.C., did not meet with such cases when in the East. Although it is to some degree increased by scratching, and the friction of garments, the disease is in no sense self-inflicted. One soldier made an attempt to copy it. He had been discharged cured of some other complaint, but, wishing to return to hospital, produced a condition seen in the next photograph; the fraud was obvious (Fig. 8). Taxed with his fault, he confessed deception, and is now, I hope, distinguishing himself in another manner.

Treatment is difficult; healing is slow and tedious, and new lesions appear in the most disappointing manner. The employment of fomentations is indicated at the beginning; they act, I suppose, by bringing up reinforcements of antibody—certainly at this stage no local antiseptic applications can affect the burrowing and undermining streptococci. Fomentations should be continued for a few days only, and then perchloride dressings used so long as the skin

* The author is indebted to Mr. A. K. Maxwell for his skill and care in making four coloured drawings, reproduced, and to the Medical Research Committee for the provision of his services.



Plate II.—Ecthyma: healing lesions with commencing pigmentation.

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Plate III.—Ecthyma: recent severe lesion.

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FIG. 9.—Early linear impetigo.

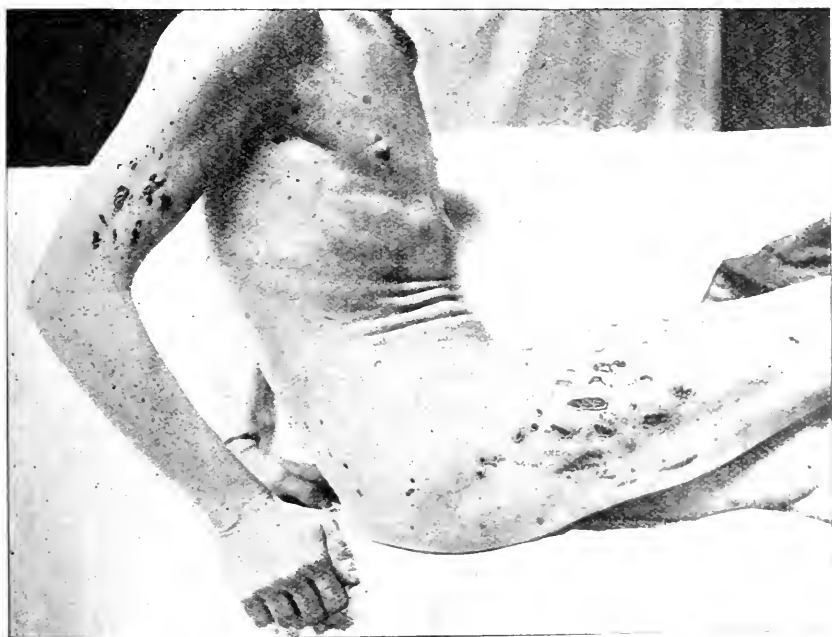


FIG. 10.—Linear impetigo—late stage.

TO ILLUSTRATE MAJOR HENRY MACCORMAC'S ARTICLE ON SKIN-DISEASES AND THEIR TREATMENT UNDER WAR CONDITIONS.



FIG. 11.—Linear impetigo—late stage.

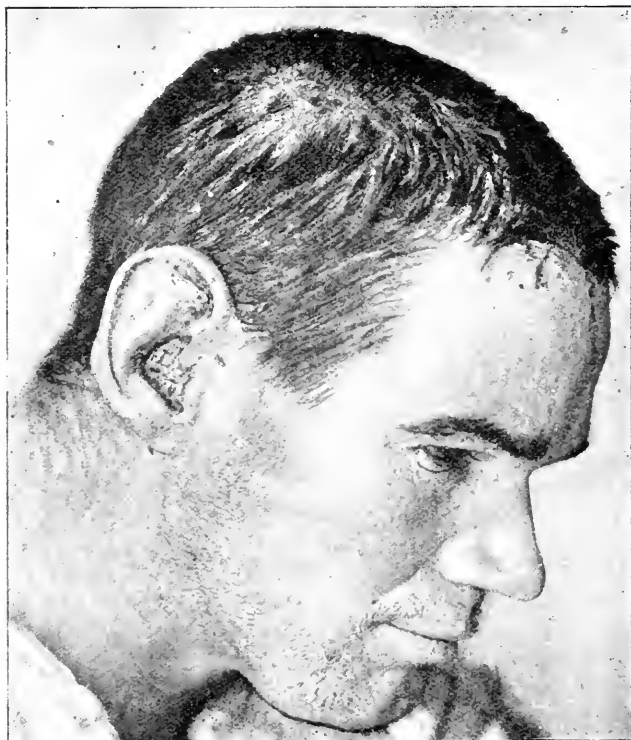


FIG. 12.—Impetiginised seborrhoea, chiefly affecting ears and scalp.

TO ILLUSTRATE MAJOR HENRY MACCORMAC'S ARTICLE ON SKIN-DISEASES AND THEIR TREATMENT UNDER WAR CONDITIONS.

will stand it. Recently I have found that painting with 3 per cent. silver nitrate in sweet spirits of nitre has an extraordinary and, in some cases, almost specific action, either alone or in combination with the above treatment. Its action in coagulating albumen dries up the sores, and in this way limits infection. I may add that I have tried both autogenous and stock streptococcal vaccines, with little, if any, benefit.

The next type of impetigo, a linear variety, was independently noted both by Capt. Small and myself before we became associated. It is fairly common, and characterised by the presence of longitudinal lesions. As in ordinary ecthyma, the legs are chiefly affected. The earlier stage is represented by tiny lines of grouped blood-crusts; ulceration follows, the condition then pursuing a course similar to the ecthyma just described. The following three photographs (Figs. 9, 10, and 11) illustrate pretty well the early and late appearances of this condition.

The third photograph is of a patient who admitted to three similar attacks during nine months. The sensibility of the palate was considerably blunted, and this condition, associated with a slight degree of patchy anæsthesia of the legs, is fairly common in these cases. Too much stress should not be placed upon the palatal phenomenon, for I have found this change frequently present amongst soldiers who have been under fire for any length of time. Whether linear impetigo should be classified as an artefact or not I am in doubt; its course and appearance closely correspond to such a condition, although its occurrence in males is contrary to the general rule; on the other hand, the war has occasioned types of neurosis unknown in civil life. I am inclined to consider this condition of linear impetigo as a combination of traumatism and secondary infection.

SEBORRHOEA.

The next important disease, seborrhœa, has given more trouble and proved more resistant to treatment than any other class of cutaneous affection met with in the Army. Since relapse is so frequent it would appear that many of these men are only fitted for employment in some special capacity. The following case is selected to illustrate the typical features and course of this complaint:

Private D—, aged 29 years; two years' service. Civil occupation, farm labourer. He states his scalp has always been scurfy. Present attack, the fifth, began two months before admission. The scalp and body were affected to a considerable extent. On the head three phases could be distinguished—impetiginised areas on frontal regions and ears, eczematization of occiput, vertex, and frontal regions; the rest of the scalp showed general dry seborrhœa, and this was also present on the chest (back and front), shoulders, flexures of arms, pubis, and thighs. I kept this patient in bed; he was put on a special diet with limitation of protein: he was dressed regularly. In spite of all this care, after he had been thirty-three days in hospital, so slow was progress that it was decided to send him to England; there he made a rapid recovery and will no doubt return to France, where in a short time the disease will break out again.

The diagnosis of seborrhœa is not always easy. When well marked, the characteristic distribution—scalp, eyebrows, beard, moustache—presents a picture easily recognised. The presternal and interscapular regions are also frequently involved, and "eczema" of the flexures is always seborrhœic.

The disease tends to pass through three phases, any or all of which may be represented: First, a dry, erythemato-squamous condition. Secondly, eczematization, characterised by the presence of weeping surfaces, usually limited to the scalp. Thirdly, from contamination with streptococci—a condition of impetiginisation. This last phase may cause considerable confusion, the purulent areas or "stuck-on" crusts bearing a striking resemblance to *Impetigo contagiosa*. I shall refer to this later.

The following series of photographs are selected as examples of the types of seborrhœa met with.

The first shows impetiginised seborrhœa of the scalp and ears, with dry seborrhœa of the chest. This man noted the onset three weeks before admission. A streptococcus and *Staphylococcus albus* were obtained from the scalp by culture (Fig. 12).

Typical cases are illustrated in three other photographs of this disease. Since the histories are similar to those described above, no detailed account need be given (Figs. 13, 14, and 15).

These photographs illustrate how severe a disease seborrhœa may become under service conditions. Most striking is the susceptibility of the affected individual to secondary bacterial infections. Streptococci and staphylococci appear to be invariably present, and a diphtheroid bacillus was found in five out of nineteen cases examined; morphologically it closely resembled the Klebs-Loeffler organism,



FIG. 13.—Impetiginised seborrhœa of scalp and "dry" seborrhœa of presteral area.



FIG. 14.—Impetiginised seborrhœa—eyebrows markedly affected.



FIG. 15.—Severe impetiginised seborrhoea of scalp, face, etc.



FIG. 16.—Photograph illustrating resemblance of impetiginised seborrhoea to *Impetigo contagiosa*.

TO ILLUSTRATE MAJOR HENRY MACCORMAC'S ARTICLE ON SKIN-DISEASES AND THEIR TREATMENT UNDER WAR CONDITIONS.

even to the production of involution forms and beadings, but differed in its ability to ferment saccharose. It may only be a mere coincidence, but it is interesting to note that small epidemics of diphtheria were of common occurrence in the skin-wards, but in no other part of the hospital.

Among the nineteen cases examined, in three instances a curious Gram-negative coccus was detected both in culture and by direct examination. This organism fermented glucose, arabinose, and saccharose, and only grew at body temperature on agar.

In the light of these observations, it is not surprising to note that conjunctivitis, boils, and impetiginisation are such frequent complications of this disease. Sometimes a streptococcus plays a more serious rôle, producing severe adenitis of the neighbouring glands.

The resemblance of localised patches of this impetiginised seborrhœa to *Impetigo contagiosa* is close and confusing. This is particularly true when the ears alone are affected, for in such cases a secondary seborrhœa of the meatus is set up with purulent discharge. A correct diagnosis is easily made from the history, for in these cases the ear discharge follows the skin affection and does not precede it, as in *Impetigo contagiosa* associated with Otitis media.

The impetiginisation may also be localised to the chin, or eyebrows; a photograph is shown illustrating this (Fig. 16).

TREATMENT.

It is essential that the remedies employed in seborrhœa, especially the impetiginised form, should come into *intimate* contact with the affected skin surface; for this reason, when the disease attacks the scalp, this region must be shaved as a preliminary measure. The same rule applies to the beard and moustache areas. Although secondary coccal affection with impetiginisation is so regularly present as a complication, treatment should be directed against the eczematous condition; indeed, it has been found that antiseptics, no matter how mild, almost invariably aggravate the disease. In the early stages calamine liniment acts admirably; the mode of employment is important. After the preliminary shaving lint soaked in this substance is applied to the head and face; not only does it allay the disease, but as it is of an oily nature crusts are at the same time

softened and removed. The ears require particular attention. After gentle syringing of the meatus with boric lotion, pledgets of wool soaked in the liniment are packed into all crevices; soaked wool is also moulded behind the ear in such a manner that the skin surfaces are kept apart. The whole area is then covered with dry wool and bandaged, thus "splinting" and preventing movement. Later, more stimulating remedies may be cautiously tried.

On the body, weak sulphur ointment and strong perchloride lotion have proved satisfactory; treatment of the disease away from the face presents no difficulty.

The striking resemblance of this condition to *Impetigo contagiosa* tempts medical officers to use mercurial ointments, with invariable failure. The rapidity with which calamine liniment effects improvement in these cases is astonishing.

General tonic treatment is indicated; practically all these patients complain of feeling ill, and many have told me that the disease breaks out after a preliminary few days of slight malaise. Most of them appear anæmic, and examination of the blood shows a slight degree of secondary anæmia. Two examples may be given:

Sergeant R—: Red blood corpuscles, 4,200,000; white blood corpuscles, 9500; hæmoglobin, 90 per cent.

Private B—: Red blood corpuscles, 4,526,000; white blood corpuscles, 9100; hæmoglobin, 90 per cent.

The differential count shows no unusual features.

OTHER VARIETIES OF SKIN DISEASE.

A brief reference should be made to some of the other varieties of skin affections met with. During last summer *Pityriasis rosea* assumed almost epidemic proportions. The type was peculiarly extensive, even affecting the extremities and face, and was usually accompanied with glandular enlargements. It was frequently followed by multiple pityriasic areas, and this sequela in many cases prolonged the course considerably. In a few instances the disease assumed an unusually acute form, characterised by extensive erythema-squamous areas of trunk and limbs closely resembling seborrhœa. The discovery of the characteristic ringed desquamation enabled a diagnosis to be made.

A curious papular urticaria appears to be fairly common; its distri-

bution—anterior axillary folds and abdomen chiefly—together with the associated itching, produce a picture closely mimicking scabies. The course is different; it tends to subside spontaneously after a few days; relapse is frequent. Sometimes it may be associated with definite wheals which clearly point to its nature, and this observation was confirmed by a series of sections of the papules. It is not common in base hospitals, being more often found in those institutions where scabies is treated. Apart from its resemblance to scabies it is of no consequence.

As has been seen from the tables of admission, psoriasis accounted for 494 cases. The type met with was severe, almost invariably affecting the scalp. Chrysarobin proved most effectual in removing the disease from the body, and although extensively employed has occasioned no ill-effects. While obtainable, resorcin was employed for the scalp; latterly, salicylic acid has been used as a substitute.

Now, although psoriasis cannot be said as a rule to affect the soldier's health or prevent him from carrying out his duties, it is desirable to treat this disease for two reasons. In the first place, so long as it is present he has a ready excuse for "going sick." Secondly, his comrades imagine the disease is syphilis and resent his presence among them.

Although special hospitals are provided for the treatment of syphilis, 126 men with this disease have been received. These have been mainly tertiary or have presented unusual or difficult secondary manifestations. When non-contagious—that is to say, tertiary—they have been kept. I do not think any harm results from this procedure. When late manifestations are found in the skin, I have never discovered the presence of nervous or vascular lesions, and I think the opinion held in many quarters may be accepted as a general rule that patients with skin gummata never develop tabes, general paralysis of the insane, or aortic regurgitation. Of course, where the tongue is involved the outlook is entirely changed, and some form of intensive treatment should be adopted.

Before ending I should like to say a few words upon the organisation of a skin hospital in France. Let it be remembered that a large part of the treatment has to be carried out by orderlies, unskilled in this particular work; that many of the sisters possess no special

knowledge of skin diseases, although their general training enables them to become rapidly expert; and that the services of few dermatologists are available. Each medical officer has about 300 cases under his care, and about 50 cases are allotted to a sister and orderly, with additional help.

To meet these difficulties the hospital was divided into sections, to which special dressing and barbers' tents were allotted. The patients bring to these the medical officer's instructions written on special treatment forms; this is signed daily by the sister or orderly, thereby checking and ensuring regularity of attendance; otherwise, some men are apt to neglect their dressings. Each medical officer pays a daily visit to his wards, but the work of diagnosis and prescription is carried out in a special hut. Here a man comes on arrival and returns at regular intervals, according to the needs of the case. This plan enables each medical officer to deal thoroughly with a large number of patients which would under any other system be difficult or impossible.

In the arrangement of all these things I have had the greatest help and consideration from the responsible authorities. Looking back on the early days when with two colleagues I sat shivering in a tent, the sides of which had to be open to permit of a little light, with snow or rain descending upon us, I am more than thankful for things as they now exist. I remember with horror the well-meant but trying efforts of the orderlies, to whom one ointment or lotion seemed as good as another. But all that is now changed. We have a staff of expert dermatologists, we have trained and expert orderlies, and the routine of the hospital proceeds in a regular and methodical way. The establishment of this special centre is, I believe, due to the foresight of the Director-General of Medical Services. Its results have already justified its existence.

It would be ungracious to conclude without expressing my gratitude to Colonel Copeland, my Commanding Officer. His sympathetic assistance and advice have been of the greatest value. It is not everyone who is able to appreciate what may be done for men with skin complaints, and how considerable a number of them can be quickly returned to duty. They are not merely "uninteresting cases." There is not perhaps the glamour and excitement associated with their treatment that some appear to derive from attendance upon

wounds. Surely they have suffered for their country as much as others; surely it is our duty as well as our privilege to give them of our best without stint and without reserve.

DISCUSSION.

Dr. J. H. SEQUEIRA: I was particularly interested to hear Major MacCormac confirm an observation of my own—one which, I am sure, is shared by many here—namely, the difficulty in diagnosing some cases of scabies contracted abroad, especially in the absence of interdigital burrows and of itching, and the difficulty in placing the acarus under the microscope. Dr. Pringle and I discussed, some time back, the question whether we were dealing with a different kind of scabies in these cases, and I have heard it suggested that an acarine parasite, probably of rat origin, from the trenches, might have been introduced by the troops who have come over to this country. I was also greatly interested in the ecthyma and impetigo cases. Those who have been doing war work will appreciate the difficulty there is in treating these conditions in many soldiers. I have under my care a man who has been in and out of hospital with dermatitis and secondary impetigo for twenty-four out of the twenty-seven months during which he has been serving his country. I have also been instructed on another point—namely, with regard to the failure of antiseptics to cure many seborrhœic cases which have become impetiginised. It is interesting to know that Major MacCormac's experience confirms my own as to the efficiency of calamine liniment after fomentation in this type of case. Another point I would mention is that these impetiginised seborrhoids have been unusually common and severe among the civilian population during the past autumn and winter. In my women's ward I have had cases which almost approximate to the type of impetiginised seborrhoids we have just been shown on the screen. Whether the infection has been imported or whether other factors are involved I am unable to say. An important matter is the enormous number of cases of groin ringworm which are coming under treatment, particularly amongst officers. One would like to know that proper precautions for isolation and disinfection are taken in the hospitals in this country in which these diseases are so prevalent. One fact which must not be overlooked is that many of the patients, particularly officers, are afraid of reporting that they have groin ringworm. I recall an experience of my own, in which I was asked to see a patient, an officer who had seen service in India, who was in a private hospital. After he had been in hospital a few weeks he developed what he recognised as "dhole itch," and I was asked to see him in consultation with the medical officer. I suggested that it would be wise to look round the ward for other cases, and in that ward of twenty beds I found three other cases, the patients having been afraid to mention the matter, as they thought it might be venereal, and that they would get into trouble in consequence. I think a large number of cases of groin ringworm, such as we see over here, are hidden for the same reason, and it should be the duty of the medical officers attached to hospitals, at any rate on this side, to examine all patients, and not wait until they are informed about this parasitic affection.

Dr. J. J. PRINGLE: I have been in close touch with Major MacCormac during the whole of the time he has been in France, and I have been cognisant of much

of the work he has been doing there. I want, at present, to say only this about it—that the opportunities afforded me of seeing skin-diseases amongst soldiers have convinced me that in practically every point Major MacCormac's observations are accurate and extremely valuable. Many of these soldiers have returned from France, but similar types arising in parallel circumstances in this country have been observed by me. With regard to what Dr. Sequeira said about ring-worm of the groin, of course we all have seen an enormous amount of it. At the military hospital to which I am attached every officer and man is now examined for it on admission, and I think that ought to be a general rule in every military hospital, as the disease is immensely contagious, and obviously so in many different ways. I think it may not be without interest if I hand to you a French translation of the second edition of the book on the diseases of armies in camps, by Sir John Pringle, which translation was published in Paris in 1793. I have been unable to find, anywhere, a copy of the first edition of the book, which appeared in 1752,* nor can I in this country find a copy even of the second edition. I am, therefore, proud and fortunate to possess, as I have all my life, this French translation of the second edition. It is very interesting to note in the chapter which deals with scabies that the presence of "animalcules" in this disease had been observed, prior to 1730, by Dr. Bonomo, who, on the ground of his discovery, advocated treatment of the itch by external remedies only.

Dr. G. PERNET: I am very interested to hear what Dr. Pringle has just said with regard to the historical part of this discussion, because the credit of having discovered the acarus has always been attributed to a Corsican named Renucci, who studied in Paris in the earlier part of the nineteenth century. It is also interesting to know that Napoleon himself suffered from itch in his campaigns. With regard to scabies in soldiers, the difficulty we had at the West London Hospital was in the adequate supervision of the treatment. It was often very inefficiently carried out by the patient whilst in the bath. These cases are now side-tracked to a military hospital. A point which is often lost sight of is the period of incubation of scabies, which is from three to six weeks. This may enable you to put your finger on the origin and source of the original scabies infection. With regard to Pityriasis rosea, I have seen a few cases in men back from the Front, chiefly officers. The eruption was more severe than usual. I agree with Major MacCormac as to the difficulty of treating cases in which there are many impetiginous and bad pus lesions. These may hang fire for weeks. I have not, however, had under my care such severe cases as some of those which Major MacCormac has shown on the screen. I shall certainly try the 3 per cent. silver nitrate in sweet spirit of nitre in cases of that type.

Dr. S. E. DORE: It is only possible, now, to deal with one or two points. With regard to the vapour treatment of scabies, I think the views of this Section were definitely expressed when the paper on the subject was read by Col. Bruce. I suggest, however, that if the sulphur vapour treatment of scabies is of value, it might be more simply carried out by using an impermeable mackintosh bag, which could be tied round the neck, the patient being seated on a chair, and means taken to prevent the escape of the sulphur vapour after the fashion of a

* Pringle, Sir John, *Observations on the Diseases of the Army in Camp and Garrison*. In three parts, with an appendix containing some papers of experiments read at several meetings of the Royal Society, 8vo, Lond., 1752.

home-made Turkish bath, instead of the cumbersome and expensive wooden boxes. But I agree with the view expressed by the majority of speakers at that meeting, that the ordinary method of using soft soap baths and sulphur ointment, or the continental method of soft soap baths followed by Vlemineckx's solution, is more likely to be of value in treating large numbers of soldiers. Sulphur, however, is not a *sine quâ non* in the treatment of scabies. Beta-naphthol and balsam of Peru are equally efficacious, and can be used continuously without setting up a dermatitis. Beta-naphthol alone is apt to be painful, and I recently had an instance of this when I ordered the mixture at a military hospital, and balsam of Peru could not be obtained; the beta-naphthol was so painful that its application had to be stopped, but when balsam of Peru was added there was no further complaint. I have lately seen several cases of scabies in which there has been a total absence of itching. The first was in a soldier who had a severe and typical attack of scabies, and was also suffering from shell-shock. I thought that the shell-shock probably accounted for the absence of itching, but since that time I have seen five or six cases of well-marked scabies, from which I have been able to extract acari, in which there was no itching whatever. I was surprised that Major MacCormac did not lay more stress on the subject of pediculosis. An officer from the Front told me that by wearing cotton underclothing and soaking an alternative set in petrol every day, it was possible to keep almost entirely free from pediculi. It has also been reported that the wearing of silk underclothing is inimical to the pediculus. Of course the supply of silk underclothing to troops is out of the question, but it is conceivable that something might be done by supplying a cheap continuous garment, with elastic material at the neck and arms, to protect the body mechanically from the ravages of pediculi. Major MacCormac mentioned that Capt. Barber had not met with ecthyma in the East. I have seen a few instances of ecthymatous lesions in soldiers from Gallipoli; they were attributed by the men to slight injury by the scrub, and were termed "Dardanelles sores."

DR. G. H. H. ALMOND (Bath): Has Major MacCormac had any experience in the use of B.I.P. in the deep undermining ulcerations associated with ecthyma following scabies? I have seen cases of whitlow opened up freely, and the whole surface and pockets swabbed with spirit and packed with B.I.P., and then allowed to go for a week without dressing, the only further treatment being a little dusting powder. I have also seen other more superficial ulcerations treated successfully in the same way. And I can affirm that Mr. Forbes Fraser, from whom I received the suggestion, employs it successfully in many conditions where the whole ulcerating surface can be reached. It occurred to me, when Major MacCormac was reading his paper, that this method might be well applied to the obstinate cases of ecthyma about which he spoke.

DR. ALFRED EDDOWES: For a long time past I have been using for these rebellious cases of impetigo (particularly when they occur on the scalp), a little carbolic dissolved in spirit, and then applying boric acid fomentations. Probably the reason the carbolic and spirit lotion has been efficacious is that it gets at the undermined edges. I have sometimes found that, no matter how carefully one removed the impetiginous crusts on the scalp, they accumulate again in large quantity, but that when one cleaned them with spirit and carbolic, and then used boric acid fomentations, the cases did well. I have for many years advocated

the use of spirit as an antiseptic. I do not believe in the long incubation period of scabies mentioned by Dr. Pernet. The results of infection might be seen in a much shorter period, sometimes in a few days.

Major GRAY: One question which does not seem to have been discussed is the administrative one. Major MacCormac suggests the establishment of a corps scabies station. That would mean the setting-up of a new unit in the field. I should have thought the matter could have been dealt with more simply if scabies treatment had been allotted to divisional bathing centres. I believe that at the present time these are, more or less, in charge of divisional sanitary sections. The treatment of pediculosis has now become a routine matter under divisional arrangements, and there seems no adequate reason why the treatment of scabies could not be dealt with similarly. It would also be of advantage for the cases to be treated in the division, because they could then be kept under observation, while if the corps scabies station were established this would not be possible. There is one point about seborrhœa which I should like to mention. Probably many of those people who have gone into camp in peace time, and who are subject to mild seborrhœa, have realised the very bad effect of even a fortnight of camp life on their seborrhœa. I believe that the cause of this exacerbation is the continuous wearing of a tightly-fitting cap on the scalp. The scalp sweats very much, especially in hot weather, and the organisms there grow very freely. Frequently at the end of the day there is irritation and scratching, and secondary pyogenic infection may be set up and spread in that way. After these conditions have been endured for months, very bad seborrhœa may arise if some means be not taken to control it in the early stages. I think that is the reason more cases of the disease are noted now than formerly.

Lieut.-Col. J. BRUCE (communicated): At the skin dépôt we receive cases of scabies and impetigo. The two are almost invariably combined—the man gets scabies, he scratches; the wound or abrasion becomes infected, and he develops an impetiginous condition. A "clean" case of scabies is rarely seen—generally there is much crusting. The sites in order of frequency and of severity of the impetigo are the buttocks, elbows, legs, wrists, thighs, penis, and scrotum. The lesions vary in size from a pin's head to a walnut. Large crusts are heaped up on an inflamed base, and removal of the crusts shows a raw, oozing surface. In many cases there is a deep pit or depression. Crops of small boils are frequent. The clothing is filthy in most cases, and lice are frequent. All cases, whether of scabies or impetigo, are first put through the sulphur cabinet (recently described by me at a meeting of the Dermatological Section). If no impetigo complicates the case—which is seldom—the patient is sent back next morning to his unit. All clothing, kits, boots, blankets, etc., are passed through a Thresh disinfectant, or through the sulphur cabinet if they are liable to be injured by heat. The impetiginous cases are next taken in hand and dressed daily. We have tried various forms of treatment for this condition, and find that a mild mercurial ointment combined with zinc oxide gives the best results (hyd. am. chlor. 5 gr., zinc ox. 30 gr., vaseline 1 oz.). Iodine we found useless. Solution of picric acid in sp. vini meth. has been painted on surrounding skin to harden it and render it less pervious. Scales are removed with olive oil. Deep cavities are filled up with B.I.P., after cleaning with carbolic lotion and sp. vini meth. and left for three or four days, when a healthy granulating surface is found, which soon

heals under the mercurial ointment. When the impetigo is cured, we give the patient another bath in the sulphur cabinet to destroy any re-infection with scabies from fresh cases, as it is very difficult to keep the patients separate in the camp, and then discharge to duty. The sulphur vapour treatment of the scabies is proving successful, but the impetigo is our great obstacle to rapid evacuation of cases, and if the meeting can suggest any method of treatment not entailing too much dressing (as dressings are scarce) which will give rapid results, I shall be glad to hear of it. Many cases have to be kept in from four to six weeks. The treatment by fumigation has reduced our average number resident from troops in this area by one-half. There are two administrative difficulties with which we have to contend: (1) Malingering. After a man has been returned to his unit he may complain to his medical officer of itching, and point out his old scars of impetigo, which perhaps have become irritated by friction with clothes. The medical officer then sends him down to a field ambulance, and back he comes to us—often with no signs of scabies. We have also had more than one instance of men in the skin depôt rubbing their impetigo spots to prevent them from healing. (2) When a unit is in rest billets for four days the men have blankets issued. These are collected when that unit goes for its spell of duty in the trenches. In the trenches men report to the medical officer that they are suffering from scabies and impetigo, and they are sent back to the skin depôt. There is no possibility of getting their blankets. They are re-issued to other men when the unit comes out to rest. The dirty clothing of the men is one of the main factors in causing the impetigo—the primary irritation being due either to scabies or lice.

DR. AGNES SAVILL: Zinc ionisation is well worth trying in these cases of inveterate impetigo. I say so because we have had in our hospital cases of wounds in which, after the wounds have healed, skin areas, moist and slightly undermined, and most resistant to treatment, have been left behind, found to be due in all cases to streptococcal infection. No matter what the surgeon tried, the skin area would not heal, and the cases were handed on to me. Usually they yielded in a week or two to zinc ionisation. You cannot use it, of course, if there are many separate impetiginous patches on limbs: but if it is a question of invalidism for months, or even for years, the ionisation is worth the trouble involved. The limb might be put in a bath, with copper or zinc sulphate, 2 per cent. solution, and the positive pole attached. In whitlows, salt in a positive bath is very efficacious. Internally, 20 minim doses of dilute sulphuric acid, thrice daily, is the best remedy I know for pustular skin conditions.

THE PRESIDENT: The author hardly mentioned Tuberculosis cutis. In civil practice we see a large number of men who have been in France and elsewhere and who are subjects of that disease, some slightly and some extensively. The point is always being raised as to whether men suffering from lupus at all should be accepted for active service. If the disease is extensive over the face, there can be no question about it. But men are, not unnaturally, inclined to take refuge under the impression that tuberculosis of the skin is much more serious to other persons, in the matter of contagion, than it really is. It is a matter of considerable importance, and one which, I think, should be settled definitely. I should like to ask also about so-called tinea of the beard, which I do not think was mentioned. In civil practice we see much of this, and I

should have thought it was fairly frequent in the Army owing to the conditions in which the men live. I take it the author has not met with erysipelas during the time he has been in France. If that be so, I think we may congratulate him, and others, on the success of the campaign. [Major MACCORMAC: I have seen it, but only in a limited number of cases.] What are the plans adopted for the carrying out of the detail of treatment? Major MacCormac said in his paper that the men were helped in the rubbing. One or two members have spoken as if a man can rub soft soap over the *whole* of his body—back and front—which, we know, is quite impossible. But one notices in London that orderlies and others are not always so ready to afford such assistance to the patients as they require, although it has been explained that there is no risk in the help they are asked to give. But I think patients themselves might be induced to help each other, for if this were done one of the chief difficulties of application would disappear. To prescribe is one thing, but to get the detail of treatment thoroughly carried out, at all events in hospital, is a very different matter.

Major MACCORMAC (in reply): Dr. Sequeira has asked if groin ringworm is common among the troops in France. There have been a few cases, almost all in men coming from Gallipoli or Egypt. Since every patient is completely stripped for inspection, it may be assumed that the condition has not been overlooked and that it is really of infrequent occurrence. The seborrhœic eczemas have assumed a proportion and severity unusual in civil practice. Dr. Sequeira has, of course, an enormous experience of skin diseases, but I do not think that, even among his large number of cases, such severe types can be as common as they are in France. They are certainly very rarely observed at the Middlesex Hospital, and I do not recollect coming across them at the St. Louis Hospital in Paris.

Dr. Pernet spoke about the diagnosis of scabies. Of course, I do not intend to suggest that an expert dermatologist would experience any difficulty. My remarks were more directed towards that medical officer who has no special knowledge of skin-disease, and who is naturally puzzled by the unusual type met with. Over-treatment is very common; the practice of giving a supply of ointment to a man with instructions to continue using it until cured is responsible for many instances of severe dermatitis.

I am not quite sure from Dr. Dore's remarks whether he approves of the sulphur vapour apparatus for the treatment of scabies. A modification has recently come under my notice in which the man, with his clothing on, got into a bag into which sulphur vapour was pumped. This was supposed both to cure the disease and disinfect his clothing at the same time. The whole point about this form of treatment is that unless pushed to the extent of causing dermatitis, it fails to cure, and in fact, manufactures a class of "scabies carrier." No doubt balsam of Peru and beta-naphthol ointment will cure scabies, but their price is a great handicap. Balsam of Peru is listed at 1s. 1½d. for 2 oz. The same amount of beta-naphthol ointment in the form usually employed costs about 2½d. Contrast with this sulphur ointment at 1¼d. Where large numbers of men are to be treated these differences in price amount to a considerable sum. I think the importance of pediculosis has been much over-rated. A great deal of attention has been given to this question without any very striking results. Since it is almost universal at the Front, whereas ecthyma only occurs in a

certain proportion of men, I do not think one is justified in assigning to pediculosis more than a *role* of modified importance, in the causation of this disease.

Major Gray suggests that divisional baths might be employed in the treatment of scabies. Now, the whole point in having the treatment of this disease carried out by corps stations is that by this arrangement the *personnel* becomes fixed; this does not happen in a divisional centre when it is, as it would be, staffed from a division.

I quite agree with Dr. Savill that ionisation would prove excellent for many of the cases, but where over 1000 men have to be dealt with, each man presenting multiple lesions, the amount of time required makes such a form of treatment impossible.

In reply to the President's questions, I may say that we get a few cases of lupus, but unless extensive or obviously getting worse, we do not deal with them, as it is impossible to detain such men in hospital sufficiently long for thorough treatment. Quite recently a number of men with beard ringworm have been met with. They all came from mounted branches, such as cavalry or artillery. On the whole, beard ringworm and erysipelas have been rare. In treating scabies the patients are grouped in pairs, each man helping the other to rub the ointment into inaccessible regions. An orderly superintends and assists in the rubbing.

PYODERMIA OF PARASITIC ORIGIN.*

BY CAPTAINS H. C. SEMON AND H. W. BARBER, R.A.M.C.(T.C.).

It is impossible to work for any length of time at a Military Hospital for diseases of the skin without being impressed by the large preponderance of cases of pyogenic infection.

Thus, out of a total number of 669 patients admitted under our personal care, between April 1st and May 9th, 1917, 631, *i.e.* 94.3 per cent. were cases of this nature.

Among soldiers, pyoderma of the scalp, face and neck, is usually associated with the seborrhœic diathesis (Darier's "Kerose"), whereas, when it occurs on the trunk and limbs it is, in our opinion, almost invariably the result of a concomitant or preceding parasitic infection, *viz.* : scabies or pediculosis.

It is the object of this paper to establish the parasitic ætiology of pyoderma of the trunk and limbs, to emphasise the striking differences in the clinical pictures produced by the *acarus* and the louse, and to

* For the purpose of this article it is proposed to use the word "pyoderma" to indicate the various types of lesions denoted by the terms "impetigo, furunculosis, and ecthyma."

describe briefly the therapeutic measures which, in our hands, have yielded the best results.

There is seldom any difficulty in recognising pyodermia due to scabies, even though there be no active lesions present. The distribution of the eruption, or of what remains of it when the case comes under observation, is highly characteristic.

As it is of paramount importance in the differential diagnosis of the various types of pyodermia, we may be pardoned for briefly recalling the main features of the scabietic eruption.

SCABIES.

For descriptive purposes we propose to consider:

- (1) A case of early scabies.
- (2) One in which secondary pyogenic infection has occurred.
- (3) One in which the affection manifests itself in a subject with the seborrhœic diathesis.

(1) To meet with cases of early and uncomplicated scabies in troops fresh from the trenches is exceptional, as pyogenic infection is a rapid and almost constant sequel.

In such, burrows and vesicles, if present, can most easily be demonstrated on the hands, especially along their ulnar borders, and between the fingers; on the flexor aspect of the wrists; on the prepuce and glans penis; and on the ankles and dorsum of the foot.

(2) When secondary infection has occurred, papules and superficial pustules and boils make their appearance, not only in the above situations, but also on the extensor surfaces of the elbows, the anterior axillary folds (where they are sometimes associated with burrows) round the nipples, and very commonly around the umbilicus, and on the lower half of the buttocks. On the lower extremities the eruption is most evident on the posterior and internal aspects of the thighs, the anterior aspect of the knees, the popliteal space, and behind the malleoli.

It is also worthy of remark that long after all evidence of active infection has subsided, chronic pruriginous papules tend to persist in certain situations, particularly the wrists, the inner surfaces of the thighs, the buttocks, and on the scrotum and penis.

A feature of the scabietic eruption that has helped us in doubtful cases of pruritis and pyodermia—and one, the importance of which

we particularly desire to emphasise—is the peculiar goose-like appearance of the affected cutis in general.

On examination with a lens this appearance is found to be due to the erection of the pilo-sebaceous follicles, and in our experience it is an almost constant, though unexplained, phenomenon in scabies.

(3) Where the exudative seborrhœic diathesis exists, infection with scabies is usually associated with a severe and widespread eruption. The acarus is one of the most potent agents in provoking and lighting up an acute seborrhœic dermatitis in persons thus predisposed, which is not infrequently mistaken for the dermatitis excited by the injudicious use of sulphur.

(N.B.—On the other hand, seborrhœic subjects are particularly liable to suffer from sulphur dermatitis).

The eruption begins as a discrete papulo-follicular eczema confined to the erected pilo-sebaceous follicles already described. Later, confluence takes place by the eczematisation of the intervening skin, the discrete follicular appearance is lost, and diffuse patches of eczema, which may later coalesce to form large plaques, make their appearance.

These characteristic lesions may be generalised, but tend to be most severe and persistent on the forearms, the inner surface of the upper arms and axillæ, between the scapulæ, on the lower abdomen, on the inner surface of the thighs, and in the popliteal spaces. In this type of case, seborrhœic eczema of the face and scalp often co-exists, and is apt to prove a trap to those who have hitherto believed that facial eruptions preclude a diagnosis of scabies.

PEDICULOSIS.

The conditions under which our troops have been fighting are responsible for the occurrence of cases of pediculosis, far more severe and extensive than are commonly seen in civil hospital practice. There is no doubt whatever that in this connection the *P. vestimentorum* or *corporis* is the chief offender. It is rare to find *P. pubis*, while *P. capitis* is still more uncommon. We will, therefore, confine our remarks to the *P. vestimentorum*. The following description of the main external characteristics of the parasite is taken with acknowledgments from that excellent monograph—*The*

Louse Problem at the Western Front—by Lance-Sergeant A. D. Peacock :*

"The female is about 4 mm. in length, the male about 3 mm. The head bears one pair of antennæ, and the black eyes. The three thoracic segments are fused and present but little demarcation. There are three pairs of strong legs attached to the thorax, each of which terminates in a short powerful spine. There are eight abdominal segments, the two terminal being fused. Posteriorly, the male is pointed and the penis may sometimes be seen extruded, whereas, in the female, the posterior end is bilobed, and bears a pair of ventral copulatory organs."

It is well known that the female deposits her eggs in clothing of all sorts and in blankets, and most of the prophylactic measures against "lousiness" have been directed to the sterilisation of the soldiers' kits. It does not appear, however, to have been generally realised that the *Pediculus vestimentorum*, like the *Pediculus pubis*, also almost invariably attaches its eggs to the pubic and perineal hairs, and less commonly to those of the axillæ, and other covered hairy regions. In no available text-books or monographs to which we have had access is this fact referred to, although its importance is at once obvious and far reaching.

Some months ago one of us (H.S.) in examining seven consecutive cases of ecthyma and furunculosis of the lower extremities, happened to notice in each of them the presence of "nits" on the pubic hairs, and from this time forward we have made a point of carefully examining the pubic and axillary hairs in every patient that has come before us.

The results of our observations may be summarised as follows:

(1) In almost every case presenting any or all of the lesions we have learnt to associate with pediculosis, "nits" were found either in the pubic, axillary, or perineal hair.

(2) In cases of pediculosis in which new lesions developed while the patients were actually under treatment in hospital, careful search of the above-mentioned hairy regions almost invariably revealed the presence of "nits" which had escaped the attention of the orderly in charge of the case. Removal of these, the application of paraffin, or 1 in 40 carbolic lotion, and a complete change of kit were

* *Brit. Med. Journ.*, 1916, vol. i, pp. 745, 784.

always successful in preventing the further appearance of fresh pustules.

It may here be said that until we realised the importance of the pubic and axillary hair as breeding places for lice, our cases of pediculosis were constantly developing new furuncles (*i.e.* infected bites); now that we insist on the pubic and axillary hair being cropped, and all "nits" removed with paraffin, this no longer occurs. The cases are consequently cured in a very much shorter time.

(3) Although *Pediculus pubis* is occasionally met with, and when present is usually found both on the pubis and in the axillæ, in the vast majority of our cases the eggs found in these regions were those of the *Pediculus vestimentorum*.

We were first led to this conclusion owing to the frequency with which live specimens of *Pediculus vestimentorum* were found crawling among the egg-laden hairs, particularly on the pubis, although *Pediculi pubis* were absent.

We have since succeeded in hatching out young P. vestimentorum from hairs removed from the pubis, and kept at body temperature for several days. This experiment conclusively proves that the Pediculus vestimentorum habitually lays its eggs on human hair, and this fact should always be carefully considered in undertaking prophylactic measures against louse infection.

We may now consider the different lesions met with in association with pediculosis. Apart from the actual bite of the parasite and superficial scratch marks, there are three main types:

- (1) Superficial pustules and boils.
- (2) Circular encrusted lesions of varying depth.
- (3) Very characteristic linear lesions, presumably a sequel to (2) and the superficial scratch marks above-mentioned.

Scratch marks are most commonly situated on the shoulders, chest, buttocks, and sacral region, upper parts of thighs, both internal, anterior, and external surfaces, and on the legs. The excoriations correspond in their different situations to the lines along which the patient can most easily scratch himself ("grattage instinctif"—Dubreuilh). Thus on the buttocks they tend to radiate upwards and outwards from the anus. On the outer surfaces of the thighs they run vertically upwards, on the inner surfaces upwards and outwards, and similarly on the sacrum.

At this stage it is interesting to compare the scratch marks of scabies with those caused by the pediculus. We have already referred to the erection of the pilo-sebaceous follicles in scabies, and in this disease the scratch marks appear as minute pinpoint blood-crusts at the apices of the erected follicles, whereas, in pediculosis, in which no such follicular erection is seen, the scratch marks are merely linear excoriations of the otherwise normal epidermis.

(1) *Pustules (superficial) : boils (deep).*—Our observations would lead us to believe that a superficial or deep pustule is the initiatory stage of the other lesions met with in pediculosis. The sequence of events is as follows :

(a) An indurated irritable bright red halo arises around the original bite. In the centre of this a minute yellowish-white vesicle rapidly drying to form a crust, makes its appearance.

When pressure is applied to a superficial lesion at this stage a small quantity of pus is exuded from the central vesicle or crust. In the deep variety (or "boil") which is often elevated and surrounded by a wide area of induration, similar treatment results in the forcible projection of a considerable quantity of sanguineous pus, from what is evidently a bottle-shaped cavity. In both types of lesion the superficial opening or mouth is very minute and of definitely circular outline, a fact that supports our view that these pustules are originally formed round punctures made by the parasite.

If these pustules are dealt with in this early stage by ordinary antiseptic applications (*e. g.*, tinct. iodi.) they usually involute without progressing further, but, if not interfered with, the lesions tabulated under (2) are apt to result.

(2) *Circular encrusted lesions of varying depth.*—It is not difficult to trace the progressive development of ulcers of varying depth and extent (as may be seen by a reference to the accompanying photographs) from the pustules above-described.

(3) *Linear impetigo.*—Superficial linear encrusted lesions result from the exudation of serum along the lines of excoriation due to scratching; they may occur in any pruriginous complaint, and are in no way especially characteristic of pediculosis.* On the other hand,

* Major MacCormac and Capt. Small have recently drawn attention to the fact that superficial "linear impetigo" may be a manifestation of what they aptly term a "war neurosis." It is frequently associated with anæsthesia of the palate, altered cutaneous sensibility, and other stigmata of the psychopathic state.

the variety which is pathognomonic of louse infection is a gutter-shaped ulcer covered by a brownish crust, and of considerable depth. Its outline varies with the stage of its development which, in our opinion, proceeds from the longitudinal digital excavation of one of the circular ulcers above-described; and, in fact, in a severe case of pediculosis, all the intermediate stages between the circular and the rectangular gutter-shaped ulcer, so-called "*impetigo linearis*," can easily be demonstrated (*vide* photographs).

These circular and linear lesions when healed are invariably replaced by bluish stains and brown pigmentation which persist a long time, or if sufficiently deep, by the formation of actual scar tissue.

DIAGNOSIS.

The chief points in the differential diagnosis of the eruptions due to scabies and pediculosis may now be presented in a tabular form.

Scabies.

Localisation.

Hands, wrists, elbows, anterior axillary folds, umbilicus and abdomen, lower triangular area on the buttocks.

Penis and scrotum.

Front of knees, ankles, and feet.

Pediculosis.

Posterior axillary folds, shoulders, sacral region, and upper part of the buttocks, groins, thighs, and the skin between knees and ankles.

Type of Lesion.

Burrows, vesicles, small superficial crusts, papules, pustules, and a specific erection of the pilosebaceous follicles with secondary eczematization, especially in seborrheic cases.

Scratch marks are represented by minute blood-crusts at the apices of the erected follicles.

Superficial and deep pustules with a surrounding red and indurated halo. Circular encrusted ulcers of varying depth and size, but on the whole very much larger than those met with in scabies.

"Linear impetigo."

It is obvious that since infection with both the parasites is quite common, the two clinical pictures may be superimposed.

PROPHYLAXIS OF PEDICULOSIS.

It is beyond the scope of this paper to supplement by other suggestions the measures for the disinfection of blankets and clothing at present in use at all general hospitals and military cleansing depôts in France. We would, however, emphasise the extreme importance of simultaneously eradicating the reservoirs and breeding-places on

the human body itself (as is done in scabies), for which purpose baths, medicated or otherwise, are not sufficient.

If these are overlooked, it is obvious that there is every likelihood of a rapid re-infection of the sterilised garments within a short time of their re-issue. We have found the cropping of the pubic hair and the repeated application of paraffin, or 1 in 40 carbolic lotion, to the pubis, perinæum, and axillæ quite effective, although there is no doubt that, if it could be supplied, petrol (which is used for this purpose in the French army) would be the most powerful agent, as it not only kills the adult parasite instantly, but also penetrates the chitinous envelope of the ovum, and detaches it from the hair.

An improvement on petrol is the solution of naphthalene 1 per cent. and sulphur 1 per cent. in benzol or petrol, recommended as of proved efficiency by Capt. J. A. Gunn in the *British Medical Journal*, May 5th, 1917.

This solution is not only prophylactic to garments, momentarily steeped in it, over several months, but is, as we are informed, and have ourselves proved, instantaneously lethal to both parasites and their eggs.

TREATMENT.

In soldiers the routine treatment of scabies has already been exhaustively dealt with in this number of the *Journal* by Major H. MacCormac; it is therefore unnecessary to discuss it here.

The most important point to be observed in the treatment of pediculosis is the discovery and elimination of the parasite and its eggs.

The methods found efficient by us have already been described. It now remains to mention briefly our methods of treating the secondary lesions.

If the primary pustule is of small or moderate size, expression of the contained pus and painting the surrounding skin with iodine is almost always sufficient to ensure resolution.

When ulceration and crusting have occurred, there is nothing which in our hands has yielded better results than an ointment of the following composition:

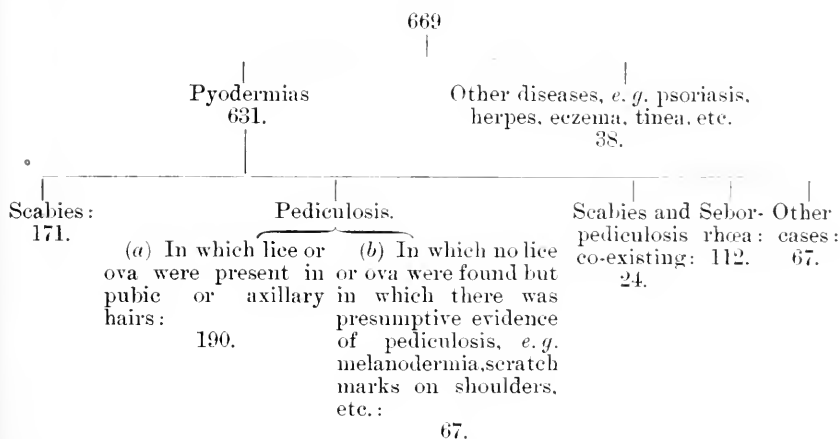
Acid salicyl.	} āā gr. x
Sulph. precip.	.	.	.	.	.	.
Ung. hyd. ox. flav.	.	.	.	.	.	ad 3j

This is kept applied day and night on linen or lint, and in from four days to a week the superficial ulcers will be found, in the majority of cases, to have healed completely. Deep ulcers of an ecthymatous type also do well under it, especially if the patient is kept in bed with his legs raised. It is only occasionally that we meet with the deeply eroded, indolent variety. These have to be treated on general principles with the patient in bed, and will tax the therapeutic resources and skill of the physician to the utmost.

INCIDENCE.

The views which we hold on the great importance of the pediculus as a cause of disability are strongly supported by the figures we submit below.

The results of our analysis may be tabulated as follows:



Total number of cases, 669, admitted between April 1st and May 9th, 1917.

These are the combined results of our independent observations; the individual figures were as follows:

	Scab.	Ped. (a) (b)	Scab. and ped.	Seborr.	Other cases of pyoderma.	Other cases.	Total.
H.C.S.	101	83 44	11	51	42	14	346
H.W.B.	70	107 23	13	61	25	24	323

Thus the various totals correspond fairly closely under each heading.

It will be seen that out of a total number of 631 cases of pyoderma, 452 were associated with parasitic infection, *i. e.* 71.6 per

cent. Of these latter, 171, *i. e.* 37·6 per cent., were consequent on scabies alone; 257, *i. e.* 56·9 per cent., were apparently secondary to pediculosis; while in 24, *i. e.* 5·5 per cent., the two infections were co-incident.

The preponderating percentage of the pediculous cases is at once apparent. Of the remaining non-parasitic cases of pyodermia, seborrhœa—which is common and of a severe type among our troops—accounts for the majority, whilst in only 67 could no definite cause be assigned. We are therefore justified in assuming that parasites are responsible to a very large extent for the disability induced by skin-diseases in this war.

CONCLUSIONS.

(1) The disability produced by parasitic infection is very considerable. Of 669 cases admitted in just over five weeks, 442 were directly attributable to scabies and pediculosis.

(2) Of these 442, 171 were due to scabies alone, 24 to the combined infections, and 257 to pediculi.

(3) The *Pediculus vestimentorum* can, and in a considerable majority of cases actually does lay its eggs in the hair of the pubis and perinæum, and sometimes of the axilla.

(4) From this fact there arises the important deduction that measures directed towards sterilisation of the clothes cannot be efficient, unless the host himself is also disinfected at the same time.

(5) We regard it as extremely probable that the lesions of pediculosis are initiated in susceptible individuals around the actual bite of the louse.

(6) The severity of the lesions produced, especially in the case of scabies, is very considerably aggravated by the seborrhœic diathesis.

(7) Rapid recovery in pyodermia associated with either scabies or pediculosis is the rule, provided that the respective causes are recognised and dealt with in an efficient manner.*

* We have been asked to explain the fact that whereas about 90 per cent. of all troops in the trenches are infected with lice, only a relatively small proportion (the exact figures cannot, of course, be given) present the secondary lesions we have described. It can be contended that there is an individual susceptibility in some cases, such as has been proved to exist in the case of flea-bites (Boycott) and those of mosquitoes and other insects. In other cases the phenomenon of anaphylaxis probably plays a part, so that the susceptibility of the individual, as evidenced by the appearance of the lesions, is at first latent. That some specific

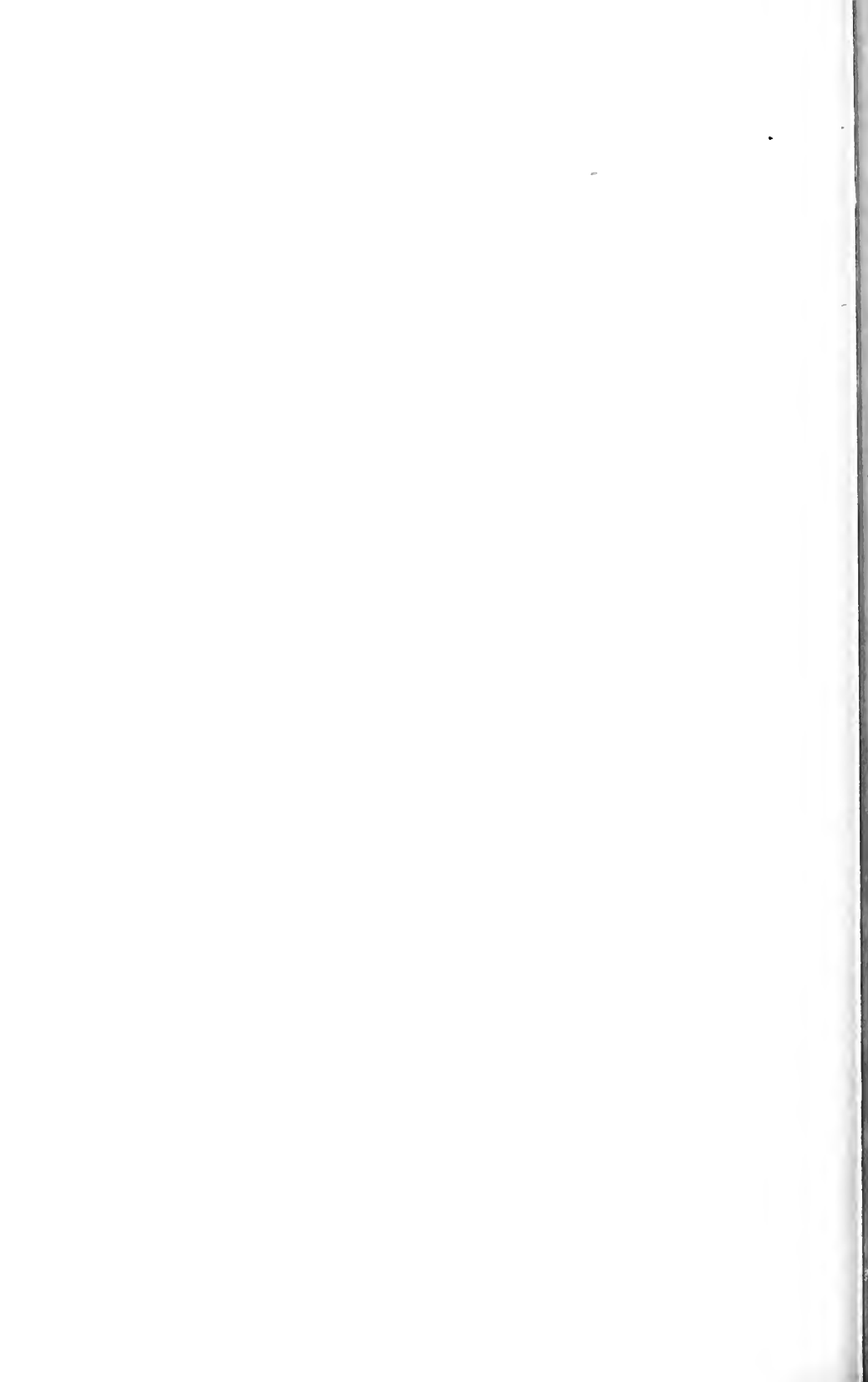


FIG. 1.



FIG. 2.

TO ILLUSTRATE CAPTAINS H. C. SEMON AND H. W. BARBER'S ARTICLE ON PYODERMIA OF PARASITIC ORIGIN



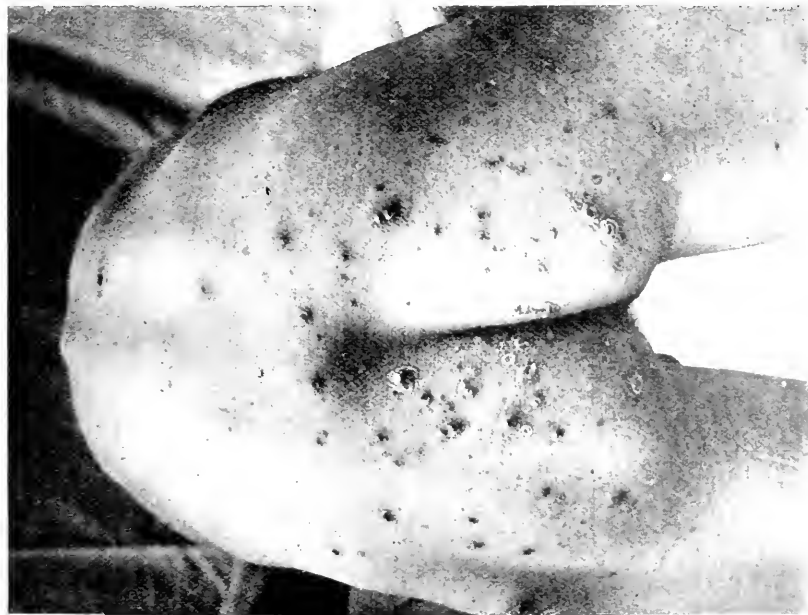


FIG. 3.



FIG. 4

TO ILLUSTRATE CAPTAINS H. C. SEMON AND H. W. BARBER'S ARTICLE ON PYODERMIA OF PARASITIC ORIGIN.



FIG. 5.



FIG. 6.

TO ILLUSTRATE CAPTAINS H. C. SEMON AND H. W. BARBERS ARTICLE ON PYODELMIA OF PARASITIC ORIGIN.

DESCRIPTION OF FIGURES.

FIG. 1.—A case of scabies which demonstrates what is meant by follicular erection. The minute blood-crusts on the apices of scratched papillæ are well shown, and there are obvious linear excoriations on the posterior and internal aspects of the left thigh. Most of the secondary infection is limited, as can be seen, to the lower half of the buttocks. This picture should be compared with that of "linear impetigo." Note in the latter: The absence of follicular erection; the more scattered and larger size of the lesions; the linear or radiating tendency (grattage instinctif).

FIG. 2.—A well-marked example of so-called "linear impetigo"—"grattage instinctif." The origin was undoubtedly associated with pediculi, which were present in the pubic region. Note the radiating character of the lesions on buttocks. The crusted lesions, on the left buttock particularly, began as boils. Subsequent ulceration of these has taken place, and in the picture can be seen lesions in all stages of transition from a small ulcer to the linear gutter-shaped excavation with approximately rectilinear outline.

FIG. 3.—The pediculosis lesions are here displayed in several stages. Above the right iliac crest (and somewhat out of focus) is a late stage of the superficial circular ulcer (2 in text). On the right buttock, and in close proximity to the centre of the natal cleft, is an abortive example of the type described under 3 in text. The remainder partake of the characters described in detail under the heading of superficial pustules and boils.

FIG. 4.—An absolutely characteristic picture of pediculosis. Note the localisation and the appearance of the lesions: (1) An early pustule, *i. e.* infected bite, with its central yellow vesicle. (2) The central vesicle has become a crust covering a small underlying ulcer. (3) Infection is spreading peripherally along the lymphatics, and the circular ulcer is thus being produced. (4) The circular encrusted ulcer.

FIG. 5.—Two early boils which our experience has taught us to recognise of pediculous origin. They were situated on the fore- and upper arm of a patient with marked evidence of "lousiness" on the rest of his body.

FIG. 6.—Pediculosis boil on the anterior surface of the thigh. A crateriform ulcer is in progress of being formed. The characteristic, circular, crusted lesion would ultimately result.

toxin is injected by the louse when feeding is supported by the fact that in marked cases of melanoderma associated with pediculosis even the mucous membranes may become pigmented, as in Addison's disease (Thibierge and others). Darier, moreover, points out that it is not rare in such cases to find a marked cachexia with very real asthenia, a fact which we have ourselves observed on more than one occasion. Another factor in the production of the secondary lesion is, in our opinion, the co-existence of the seborrhœic diathesis, which, as we have already pointed out, plays such an important *role* in the severe eruptions primarily due to the *Acarus scabiei*.

CONCERNING THE LUTIN REACTION AND THE EFFECT
OF IODINE

By N. C. BORBERG, M.D.

From 6th Ward of Kommune-Hospitalet, Copenhagen (Chief: Prof. Friedenreich).

ATTEMPTS to elicit cutaneous reactions in lues, analogous to Pirquet's reaction in phthisis, had already been made by a number of different investigators before the syphilitic virus was known. As a grafting material some syphilitic organ had been applied. The results, however, were of so uncertain a nature that the method found no general application. Neisser and Meirowsky had found that normal hepatic-extract could not only occasionally give a similar exanthematic result as syphilitic, but that the test might also give a positive result in patients where there was no reason to suppose the existence of syphilis. However, from these experiments it became evident that a strong reaction was often to be seen in syphilis, especially in the tertiary forms. In Neisser's opinion, however, this is not of any specific "allergic" nature, but only an expression of an altered receptivity—an "Umstimmung"—of the skin, and this view is supported by the daily clinical experience that casual injuries in syphilitic patients can occasion the appearance of "specific" manifestations. This had previously been shown by experiments on "superinfection," by which it became evident that inoculation of chancre-material produced a papule in the secondary but a gumma in the tertiary phase of syphilis.

With Noguchi's pure cultivation of *Spirochæta pallida*, a new stimulus was added to these investigations. He brought forward (1911) a sterile extract of the spirilla cultivated in ascites-agar ("Lutin"), and of this he made intra-cutaneous injections. In the course of a short time, generally in two or three days, there arose a papular or a pustular reaction. A third form, which is named by Noguchi the torpid one, has no morphological distinction from the pustular form but is characterised only by its appearing several weeks after the injection. Noguchi by this method found the following

conditions in syphilitic patients in their different phases: In primary and secondary syphilis the reaction was negative. However, after energetic treatment it might become positive during the first years, even where the disease was latent. In the tertiary phase the reaction generally was strong and pustular, and in the hereditary form seemed to be quite as vigorous. In dementia paralytica 45 of 72 cases were found to react positively; in tabes dorsalis 3 of 5 cases. Noguchi suggests that a positive "Wassermann" and a negative "Luetin," in a later stage of the infection, may indicate a bad prognosis, whereas he considers cases, in which the "Wassermann" and "Luetin" are negative, as cured.

Even if Noguchi's results in their main features have been confirmed by later investigators, especially as to tertiary syphilis, the ratio between the number of positive and negative reactions in the different stages of the disease, as also in non-syphilitic patients, have nevertheless been rather variable. In any case it is impossible to avoid noticing that *in reality the effect of the luetin has been the same as that of the organic extract*, and it has become apparent that it is not, at any rate not solely, the specific virus which determines the reaction, but, on the contrary, a peculiarity of the skin that now and then may be found in apparently sound individuals, but is found in its most marked form in tertiary lues. This appeared in a certain measure even in Noguchi's own experiments in so far as he perceived that some reaction took place in those syphilitic patients who reacted positively to luetin, on the spot where he for the sake of control had injected the deposit fluid (ascites fluid + agar) alone. The difference between the exanthematic reaction of material containing the *Spirochaete pallida* and that which was free from the spirochaete was, however, so great that he considered that the former, in addition to the above-mentioned "Umstimmung" of the cutis, depended on a specific "allergic" reaction. Boas and Ditlevsen, however, were in doubt as to the supposition that any specific process had part in this reaction. At all events they did not consider it as being evident, because, in patients where the injection of luetin gave a positive reaction, as a general rule, they obtained a similar or even still stronger reaction with dead cultures of gonococcus, *Bacterium coli*, etc. Later investigations by different observers have pointed in the same direction but, so far, they have not succeeded in procuring perfect clearness.

These difficulties have gradually brought the cutaneous reaction, as a diagnostic agent in syphilis, to an *impasse*. Different authors have made attempts to improve the method by making preparations from fresh syphilitic organs and use these instead of the extract of spirochæte cultivated for some time; this is really a return to the days before Noguchi's work. But even if "genuine luetin" has been used, manufactured exactly in conformity with the directions of the inventor, the results of the experiments made with this material have not always agreed with the results obtained with the original luetin. The sources of error of this method, which at first sight might seem to be straightforward, may in reality arise from different causes; partly in the method of preparation (sterilisation, etc.), partly in the reading of the "reaction," and finally in its dependence on the applied therapeutics. A certain confusion will at any rate arise if we compare Noguchi's "torpid reaction," which I have observed to appear six weeks after the injection, with the primary positive. It has been ascertained that energetic treatment can transform the reaction of the syphilitic organism from "negative" to "positive," and consequently it must be taken into calculation that the spirochæte dépôt, which has been placed in the cutis, suddenly at a later date will take effect, as if it were freshly injected. Syphilitic patients will only in a very few instances be left for weeks without treatment in a hospital, and I therefore believe it may be taken for granted, that *no proof has been produced that a torpid reaction can come up at all except during an anti-syphilitic cure*. According to my own experience, this *torpid reaction may arise in all forms of syphilis in the course of suitable, long continued treatment*; dementia paralytica is, contrary to Kafka's statement, no exception in this respect. Noticeable is it, that this late reaction is very often specially prone to produce considerable swelling and central purulent necrosis.

Boas and Ditlevsen seem to have been the only persons whose attention has been directed to *the possibility that the tendency to pustule formation might be connected with the patient having had iodide of potassium for some time*. However, when they found that non-iodine treated tertiary syphilitics also gave a powerful luetin reaction they did not go further into the question. When in the year of 1915 we commenced, in the sixth (neurological) ward of Copenhagen Community Hospital, to use injections of luetin in the investi-

gation of patients with syphilis of the central nervous system, we started from the point that conditions were best tested in normal, or at any rate in non-syphilitic patients. Of course this starting-point was rather imprudent. Noguchi had only obtained 2 positive reactions out of more than 250 controls; Müller and Stein 3 dubious out of 140; Fischer and Klausner (with organ extract) no positive results among the control cases. Boas and Ditlevsen, on the other hand, had 15 positive out of 124 patients (tested thoroughly with two luetin preparations), and Boas and Stürup 5 out of 248 (injected with organ extract). The results which were obtained by our experiments on patients with different affections of the central nervous system, and especially syphilitics, seemed to begin quite plausibly, and, at any rate, homogeneously, even if they did not in all respects correspond to the results obtained by other investigators. It was noticeable that virtually no patient with dementia paralytica gave a positive reaction of luetin. This was certainly quite consistent with Boas and Ditlevsen's experience that only 2 out of 28 reacted, but not so with that of Noguchi, where the proportion was 45 of 72, and not at all with that of Nonne (almost 100 per cent. positive).

In tabes we got, as most other investigators, a positive reaction in about one-half of the cases, and in encephalo-myelopathia luica, which is closely related to the tertiary forms of syphilis, about two-thirds of the cases.

However, the more numerous the luetin reactions were, the more new difficulties arose for a rational interpretation. A number of definite tertiary syphilitic patients gave no reaction; patients who on first admission reacted positively, reacted next time negatively; and finally a large number of "control cases," that gave neither anamnestic, clinical, serological (and partly anatomical) reasons for the supposition of old or fresh syphilis, gave a positive reaction. For a time it was presumed that the positively reacting "controls" might be masked cases of syphilis, although repeated "Wassermann" (after "provocative" Hg. treatment) constantly gave the same negative result, and the examination of spinal fluid, etc., showed normal conditions. When, however, the reaction of luetin, at some casual attendances in the hospital at a later period, was found to be negative, this supposition also seemed to be only slightly probable.

A closer examination of the conditions gave this rather startling

result—that *the administration of iodide of potassium (and other kinds of iodine salts) will make the luetin reaction positive, not only in syphilitic patients, but upon the whole in almost any individual.* And, what is more, the whole group of Noguchi's reactions arises most easily under just the conditions obtaining in the routine internal iodine medication in a hospital ward. The suspicion of lues which the clinical examination produces almost regularly results in two things—namely, the preliminary ordering of potassium iodide, and the endeavour to come nearer to the diagnosis by help of the “Wassermann,” etc. Now if the luetin is injected at the time that the patient begins to get iodine or the day before, there will appear in two or three days *a papular reaction.* If the patient, in the course of two to three days before the injection, has had his organism saturated with iodine salts, *the typical protuberance, with more or less marked tendency to pustular formation in the centre, will appear.* If, however, the luetin has been lodged in the skin (with consequent “negative” reaction) a week or more before the administering of iodine salts begins, there may occasionally, under influence of these, be developed a torpid reaction with a larger protuberance, which suppurates centrally, and will only be healed when the *depôt* of luetin is quite withdrawn, or the potassium iodide is stopped.

This peculiar process may, as above mentioned, occur similarly in syphilitic and in non-syphilitic individuals during internal iodine treatment. The dose necessary to produce this iodine “Umstimmung” of the skin is the one generally made use of, *i. e.* 1–3 gm. of iodide of sodium or potassium every twenty-four hours. Other iodides seem also to be able to produce a similar result; thyroid preparations, however, are not. Individual differences were certainly found in the ability to react, but practically speaking all iodine-treated individuals gave a luetin reaction.

If, therefore, such distinguished investigators as Boas and Ditlevsen had not distinctly stated that they had obtained typical positive results in quite untreated syphilitic individuals, we might from our results have been tempted to consider the luetin reaction as a bad joke more than as a means of differential diagnosis.

The number of individuals investigated by us is about 300, the syphilitic group of our material consisting of following 182 patients (the number of the positively reacting cases, *i. e.* individuals treated

with potassium iodide, is shown in brackets): Dementia paralytica 74 (3), tabes dorsalis 22 (8), meningitis syphilitica 32 (19), lues III (without affection of the central nervous system) 5 (2), lues latens (Wass. +) 23 (8), lues antea 27 (1).

The control group consisted of 114 persons having different affections—senile and arterio-sclerotic diseases, neurasthenia, tumours, alcoholism, etc.

As the reaction is always found positive in iodine-treated persons, as mentioned above, only the negative results are of any value, because a genuine luetin reaction within the iodide of potassium group cannot be distinguished from false ones. Dementia paralytica has at any rate proved to react negatively, as was found by Boas and Ditlevsen, but differing from what has been stated elsewhere. During the iodine treatment there was, however, in a number of cases a torpid reaction, or a renewed injection gave a positive result where it had been negative in the first instance. The other groups I shall not examine more closely, but only note that among those reacting negatively were found numerous typical tertiary forms of syphilis.

According to Noguchi's statement, the reaction is negative during the first years after infection. This has been confirmed by my cases, but only when no iodine has been given. Noguchi himself states that it may be positive also at this stage after an energetic treatment, which, I suppose, means that his patients, in addition to other drugs, have had iodide of potassium.

As a result of these experiences it would appear that the luetin reaction—the "genuine," and not the iodine reaction—is a very rare phenomenon, if it exists at all, and that it is, practically speaking, of no importance. At any rate, we cannot know whether the luetin reaction is more frequent in syphilitic patients than in other individuals as long as the statistics are not obtained for iodine-treated cases. If an infiltration, going on to pustule formation, should be produced at a non-treated individual, it will be necessary, provisionally, to reserve one's opinion, even if a repetition gives the same result, and to ask if it is not a simple furuncle formation without syphilis (patients with acne, diabetes, etc.). Such positive reactions were, however, not found in our material, as before mentioned.

On the other hand, there is, of course, theoretically no reason to doubt that a syphilitic, who is in an exanthematic or a pre-exan-

thematic phase of his disease, might *occasionally* get a papule or a gumma in the place where a number of dead spirochæte have been injected, as after any other injury. But in this instance also the cutaneous reaction will surely prove to be worthless, because ordinary clinical examination and a positive Wassermann (especially if brought out by treatment) will in any case decide the diagnosis.

The question here arises, *How long after iodine treatment has been stopped can the reaction be expected to be positive?* Presumably it will in some degree depend upon the size of the dose and the continuance of the treatment (the iodine fixation in the organism?); but from my preliminary experience it seems as if, after a couple of weeks' cessation, we can be certain of not obtaining any cutaneous reaction with luetin.

In this connection the question arises *whether other drugs than iodine may not predispose to cutaneous reactions*, and especially if *bromine* has the same effect. In a smaller series of experiments I have injected luetin in patients, who were given 3-4 gm. of potassium bromide daily. Two of them got a small, solid protuberance, which lasted for several days; the lesion was considerably more indolent than during an iodine treatment but undoubtedly larger, and in particular of a longer duration than "normal." These two patients took bromine for some time longer than the others, and it must be taken into account that cumulation of the drug in the organism—in this, as well as many other respects—may be of certain importance; of all the others, none reacted at all to the luetin.

Different authors state that the reaction of luetin in syphilitic patients can be transformed from negative into positive, when treated with mercury and salvarsan. As to the last-mentioned we have no experience (except when administering iodide of potassium at the same time), but mercury has been used alone in six syphilitics, all of them giving negative cutaneous reactions. Besides this, a number of the patients have, of course, been given narcotica, antineuralgica, and many other medicaments without this having any apparent influence upon the production of the cutaneous reaction.

If the luetin reaction is an iodine reaction, it seems natural to consider the question, *how Pirquet's reaction behaves under corresponding conditions.* In a small series of non-syphilitic patients I have made

some tuberculin (and luetin) experiments, first without and later with iodine administration. The tuberculin has been applied in the usual three concentrations: (1) Pure, (2) 25 per cent., and (3) 1 per cent. tuberculin, and in all cases there appeared to be an accentuation of the reaction. Even if the sensitiveness to tuberculin was increased by repeated inoculations, though this was difficult to decide, it was noticeable that in cases where the luetin reaction was extraordinarily powerful during iodine administration, there came a blazing up in the *old* tuberculin lesions, which, as well as the new ones, continued to be red, swollen, and itching till potassium iodide was excreted. This distortion of Pirquet's reaction is a phenomenon which is not altogether unimportant, because iodide of iron and the like is often prescribed for suspected glandular tumours. What the effect of bromine is in this respect I have had no experience.

If we examine the literature which appeared when Pirquet's reaction had just been started, we shall see how certain cases of "unspecific" reactions, which at that time appeared to be quite mysterious and tended to create a mistrust of the method, will now presumably find their explanation in the patients having been subjected to iodine treatment. Thus Rolly (*Munch. med. Hoch.*, 1910) communicated two cases with "Pirquet +," in which the autopsy did not show any phthisis; one of them was a seventy-nine years' arteriosclerotic with apoplexy, the other a syphilitic with aneurysm. It may be assumed that both of them had had iodine in one form or another.

It is tempting to essay an application of the experiences gained with the luetin reaction as a basis for theoretical reflections on the internal effects of iodine under normal conditions as well as in morbid cases and especially in syphilis. Anything very definite will hardly be attained by this way, but perhaps a limit may be set to the possibilities in question.

The cutaneous reaction can, as proved by Boas and Ditlevsen, be produced by injections of different sorts of dead bacteria.

From our above-mentioned results it can be taken for granted that, what happens in this experiment, is not essentially different from what we see daily in medicinal iodine poisoning, namely, all degrees of inflammatory processes, from hyperæmia and œdema to necrosis, catarrh, conjunctivitis, acne, furuncles, etc.

It might perhaps be presumed, that just as acne is due to a combined effect of the internal poisons (iodine) and the external one (bacteria in the sebaceous glands), so might individual predisposition to iodine-catarrh, -bronchitis, etc., have their cause in variations of chronic infection of the mucous membrane. The action of the iodine as an expectorant might perhaps be explained thus. Noticeable is it at any rate, that all symptoms of iodine poisoning are limited to parts of the organism lying outside the direct circulation of the blood and subject to the influence of bacteria.

It is an obvious step to compare the depôt of luetin in the skin with that of the spirochæte depôt in papules and gummata, and to regard the reaction of the iodine-imbibed tissue around the former as a picture of what may be supposed to take place around the latter. We have therefore a kind of unspecific "Herxheimer reaction," an acute aseptic inflammation, which is eradicating the chronic inflammation and dissolving the necrotic exudate, eventually by suppuration. From this train of reasoning it will also be understood why iodine operates curatively not only on the syphilitic products, but also in actinomycosis, chronic arthritis and pleuritis, psoriasis, etc., as it also can operate irritatively on tuberculous deposits. After having had my attention directed to the question I have also noticed a transient increase of inflammation from iodine administration in patients having suppurating affections, panaris, decubitus, and the like. In any case, from our experience of the luetin and Pirquet's reaction it is undoubtedly something which ought to be remembered not only for the purpose of an occasional cessation of iodine but perhaps also for the purpose of increasing, in certain circumstances, an associated inflammation.

The "reaction of luetin" is only an expression of the organism being changed by the presence of iodine in the tissue juices, so that it reacts by increasing the inflammation around bacterial deposits. This change of the reaction modus is consequently a common rule and nothing specific for the syphilitic organism.

It is a well-known thing that some workers have wanted to refer all the irritative phenomena which might arise from the circulation of iodine-salts in the blood and imbibition in the tissue to a *local setting-free* of iodine. The process is said to come about in this manner: The carbonic acid first splits off a little hydric iodide and this very

unstable compound is then oxidised into water and free iodine. The experiments in question are, however, of rather dubious value. If such a splitting took place in the organism the iodine, set free, would immediately be bound by the albumen and the lipoids. Using starch as an indicator, the amount of $n/100$ iodine which I have been able to add to a small quantity of serum or lecithin-emulsion before any blue-colour appeared, is so considerable that a corresponding amount of free iodine would certainly never appear in the organism.

Reyn, in his modification of Pfannenstiel's method for the cure of tuberculous ulcerations by the administration of sodium iodide and electrolysis has only been able to demonstrate the presence of free iodine just around the positive pole, but not farther out in the tissue. Even if iodine and potassium were separated, iodine would not be set free in any case, but would only be bound to other substances. It is, then, conceivable that it is just these iodine substances which produce the inflammatory reaction. In order to investigate this question I added some iodine partly to goat-serum and partly to a 5 per cent. lecithin-emulsion in such abundance that an iodine-starch coloration began to appear; these iodine-saturated preparations were then injected intra-cutaneously on patients treated with potassium iodide. However, there was in these cases no more cutaneous reaction than with the same preparations without an addition of iodine.

Consequently, it appears as if *the production of a cutaneous reaction requires an inflammatory producing agency of bacterial origin, against which the reaction of the organism is then strengthened by the iodine.* It is not yet possible to say, if it is a momentary freeing of the last-mentioned substance that increases the inflammatory process, but even if it were proved that iodine was made free, we should still be quite as ignorant respecting the question of what its irritative effect really depended on.

Even if it is not likely that in any measurable space of time there can be any iodine free in the tissues, there is nevertheless a possibility that this substance may enter as a link into the chemical processes which accompanies or composes the "inflammation." We may perhaps consider the peculiar reaction of the iodine salts with guaiacum-tincture as a paradigm of such a process. The yellow-brown alcoholic guaiacum solution is, as well known, coloured blue by

free oxygen when there is present a substance (the hæmoglobin of blood corpuscles, the oxidases of the pus cells, etc.), which may serve to transfer the oxygen. Iodine salts, however, evince the same ability to colour guaiacrosin blue; indeed, it seems as if oxygen need not necessarily be present; a potassium iodide solution well boiled, will, with freshly boiled guaiacum-tincture, give a strong blue colour of just the same appearance as the blood reaction; addition of oil of turpentine is not necessary. What in reality takes place we scarcely know, but the possibility that the iodine enters into the same combination with the guaiacum as the oxygen, coincidently with the potassium being bound at another place, is perhaps not so far fetched when it is taken into consideration that iodide of potassium is inclined to split when an acid as weak as CO_2 is present.

Concerning our experiences as to the conditions in the organism, several things are in reality found, which makes it probable that internal administration of iodine salts for longer time may give rise to a retention of iodine in another form than the simple salt combination. Thus the eruption of acne and the like often persists for some time after the remedy has been stopped (? iodine combination with the unsaturated sebatic acid of the cutaneous fatty substance, cholesteroline, etc.), as also the faculty for "lutin reaction" does not at once fade away. In any case it is certain, as regards bromine, that "bromoderma" can appear several weeks after potassium bromide has been stopped. Direct evidence of an iodine-binding in the animal tissue has been made by Loeb and Michaud, who found (1907) that, by injecting iodine salts, the brain, the spinal marrow, the fat, and the bone marrow were free from iodine, while this substance was accumulated in the liver, lymphatic glands, kidneys, salivary glands, lungs, and thyroid. Further, they perceived that tuberculous tissue contained more iodine than normal tissue. Syphilitic new formations were not at their disposal. On the other hand, Binz had previously been able to free iodine from potassium iodide solution by the addition of gummatous products.

The investigations now before us are as yet too limited to allow a final judgment to be passed, but even if it is uncertain how the iodine salts really act in the organism, many things point in the direction of their not being considered as chemically indifferent substances, but that it is their tendency to split that makes them such an important

link in the process which takes place during treatment, especially of syphilitic inflammation.

SUMMARY.

By the administration of iodine salts an "Unstimmung" of the organism is occasioned, which becomes apparent by an increase of the inflammatory reaction around bacterial deposits. This accentuation, which, perhaps, is dependent on a disposition to split on the part of the iodine combinations, must be supposed to be the basis for the action of iodine on chronic inflammatory exudations and especially on the syphilitic exudations.

During treatment by the customary medicinal doses of iodine salts the "lutin reaction" becomes positive, regardless of the patient being a syphilitic or not.

Positive "reaction of lutin" was found only with patients who were treated with iodine.

I beg to offer my sincere thanks to my highly-honoured chief, Prof. Dr. Friedenreich, for excellent working conditions and for his placing the material at my disposal.

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SUPPLEMENTARY NOTE.

After the above was written my attention has been called, by a review in the *Dermat. Wochenschrift*, May, 1917, to the publications of Kolmer, Matsunami, and Broadwell (*Journ. of Amer. Med. Assoc.*, September 2nd, 1916), and to an earlier one of Scherrick (*ibid.*, July 31st, 1915), regarding the action of potassium iodide on the

luetin test; the investigations of these authors have given results in conformity with mine. All I can offer as excuse for not having known these investigations before, is the fact that the war has made it still more difficult than formerly to survey the world's literature. As an instance of the difficulty I may also add that the above-mentioned review by Koenig on the luetin reaction (January, 1917) contains nothing about the effect of the iodine.

A REMARKABLE CASE OF XANTHOMA TUBEROSUM MULTIPLEX.

BY F. PARKES WEBER, M.A., M.D., F.R.C.P.LOND.

THE patient,* Mrs. S. W—, aged 66 years, Russian Hebrew (born in Odessa, but resident for the last ten years in London), has a chronic eruption of nodules in the skin of the upper and lower extremities (see Figs. 1 and 2), and likewise a few on the trunk and face. The eruption commenced gradually about eight years ago. There has been no local itching or pain with it, but the patient has for some time had a little general pruritus, especially during the nights. She has, I think, had a good deal of mental worry, which has tended to produce nervous exhaustion.

The nodules, which are obviously nearly all of them situated in the corium, vary considerably in size, and are mostly yellowish-brown or reddish-brown in colour, but a few are more red than brown. They are specially numerous on the legs below the knees, and at the olecranon regions of the upper extremities. In some parts of the legs (see Fig. 2) the nodules are grouped together in clusters, with cutaneous pigmentation between and about, as well as over them. They appear at these sites to be slowly spreading in a centrifugal manner, undergoing a process of gradual involution in the older, central portions of the areas involved. As above mentioned, the pigmentation of the skin is not entirely limited to the actual nodules.

Some of the nodules (for instance, in the upper arms) are more deeply situated, and are, in fact, almost entirely in the subcutaneous

* The patient was shown at the Dermatological Section of the Royal Society of Medicine on June 21st, 1917.



FIG. 1.—Dr. Parkes Weber's case of Xanthoma tuberosum multiplex. Photograph (June, 1917) to show distribution of the lesions on the legs and at the elbows.



FIG. 2.—Photograph (June, 1917) to show a ring-like group of the cutaneous nodules in front of the left leg.

TO ILLUSTRATE DR. F. PARKES WEBER'S ARTICLE ON A REMARKABLE CASE OF XANTHOMA TUBEROSUM MULTIPLEX



tissue; the epidermis is movable over these deeper nodules, and the skin appears not at all, or only very slightly, pigmented. There are a few yellow, slightly (or hardly at all) raised patches of skin, notably over the left scapula, which have a different appearance to the above-described eruption, but somewhat more resemble the areas of pigmented skin between the grouped nodules on the legs. The lesions on the legs are more pigmented and more congested with blood than those on the upper extremities and elsewhere.

In other respects the patient seems to have enjoyed good health, excepting that in the summer of 1916 she had a kind of vesicular keratitis in the right eye, which has left slight scarring. She has never had jaundice or (typical) gout. She has had one child (her only pregnancy), which died soon after birth. Menopause ten years ago. There is no enlargement of the liver or spleen, nor of the superficial lymphatic glands. A blood-count (May, 1917) gave 5,200,000 red cells and 8750 white cells to the cubic millimetre of blood; of the white cells 75 per cent. were polymorphonuclear leucocytes. Wassermann reaction (May, 1917) negative. Brachial systolic blood-pressure (May 19th, 1917), 160 mm. Hg. Urine (May 16th, 1917), free from albumen and sugar.

Two nodules were excised for "biopsy" purposes from the left upper arm near the elbow: (1) a raised, brown superficial nodule in the skin, of about the size of a pea; (2) a deeper, rather larger nodule situated chiefly in the subcutaneous tissue (see Fig. 3), with the skin movable over it and not pigmented. Microscopical sections from both of them were stained with hæmatoxylin and eosin and also by the Unna-Pappenheim (methyl-green-pyronin) method for plasma-cells. The microscopical structure of both nodules is identical. They are cellular masses, consisting, according to Mr. S. G. Shattock, who kindly examined sections with me, of fibroblasts, together with lymphocytes and plasma-cells. The plasma-cells, though morphologically characteristic (see Fig. 3), did not properly take on the correct differential coloration by the Unna-Pappenheim method of staining (possibly a question of technique). Mr. J. E. R. McDonagh has kindly given me the following report on the sections:

"In one section a space exists between the epidermis, which shows no alteration, and the cellular mass, which extends into the subcutis. In the intervening space the vessels are surrounded by a cellular

infiltration, which in some places is continued into the cellular mass below. In another section the cellular mass has reached up as far as the epidermis, with the result that its papillary arrangement has been reduced to a straight line. In the latter section the cellular mass is more diffuse and not so distinctly perivascular. The cellular mass consists mainly of endothelial cells, and of cells which form the walls of the cutaneous capillaries. These cells are undergoing degeneration, since the chromatin in the nuclei is not apparent and the nuclei as a whole are swollen, and since the protoplasm of the cells has in many instances disappeared, and in others is swollen, as one sees it in the endothelial cells in xanthoma. Scattered about the cellular mass are many lymphocytes and plasma-cells. In some respects the sections resemble those from a case of naevo-xantho-endothelioma which was undergoing metamorphosis.* The histological characters of the sections suggest that the condition is a chronic inflammatory one, which affects the endothelial cells and the cells in the walls of the tiny capillaries. There is nothing to suggest that the capillaries are newly formed, or that there is anything in the nature of a new growth."

In certain respects the present case reminds me of some cases of so-called "multiple idiopathic hæmorrhagic sarcoma" (Kaposi),† but there is no excess of blood or blood-vessels in the nodules, nor is there deposition of hæmosiderin. Moreover, the plasma-cells are not so numerous in the "idiopathic hæmorrhagic sarcoma" cases as they are in the present case, in which they (see Fig. 3), in some parts of the sections, form dense plasma-cell infiltrates, so that the lesions almost deserve the name of "plasmomata" or "plasmocytomata." The sections seem distinctly to show transitional forms between plasma-cells and fibroblasts—that is to say, cells resembling plasma-cells are in some parts of the sections apparently becoming elongated and arranged in strands, as if an attempt at the formation of scar-tissue was in progress.

It is possible that in cases of chronic Xanthoma tuberosum the lipoidal cells, termed xanthoma-cells, may be derived from plasma-

* J. E. R. McDonagh, "A Contribution to Our Knowledge of the Naevo-Xantho-Endotheliomata," *Brit. Journ. Derm.*, London, 1912, xxiv, pp. 85-99.

† See F. Parkes Weber, "Three Cases of So-called Multiple Idiopathic Hæmorrhagic Sarcoma (Kaposi)," *ibid.*, 1916, xxviii, pp. 309-316.

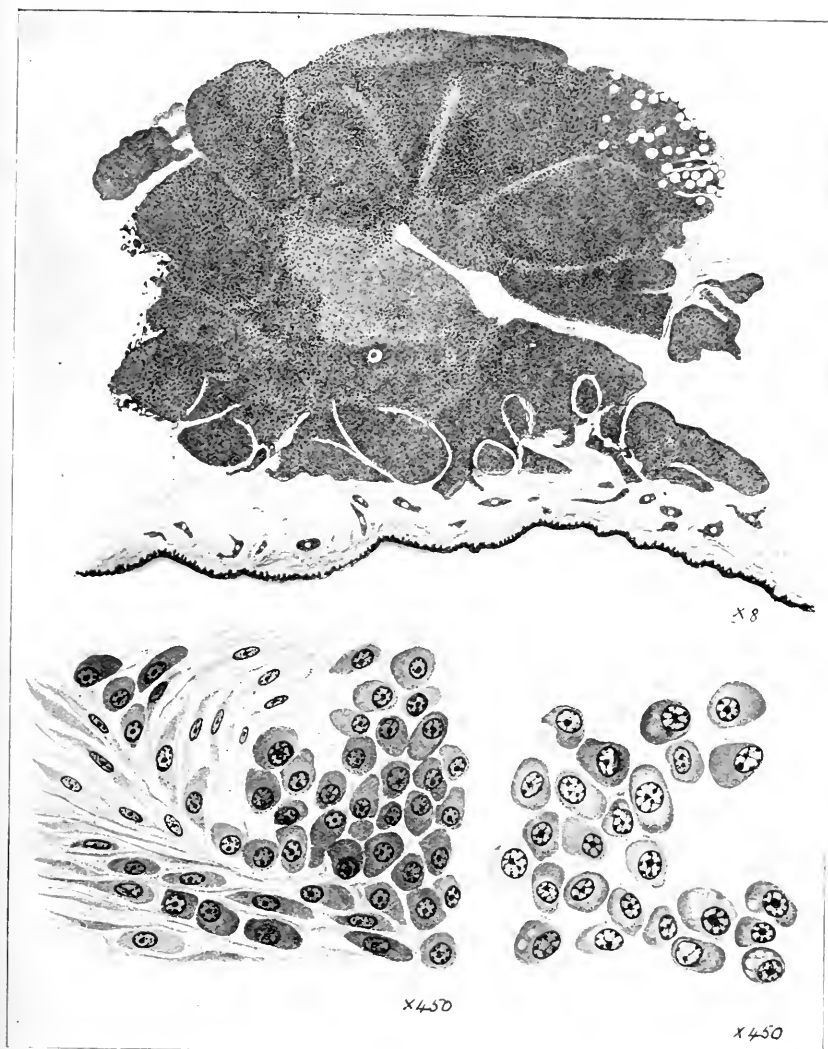


FIG. 3.—Dr. Parkes Weber's case of Xanthoma tuberosum multiplex. To show the appearance under low magnification ($\times 8$) of one of the deeper nodules from the left arm situated more in the subcutaneous tissue than in the corium. Parts of plasma-cell infiltrates are represented separately under high magnification ($\times 450$).

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cells as well as from endothelial cells by infiltration with the cholesterol-like material which produces the granules or crystals in their cytoplasm. In regard, however, to the present case, it should be noted that the presence of lipoid granules or crystals in the cells was not demonstrated.

For help in the examination of the case I am greatly indebted to Dr. H. Schmidt.

ROYAL SOCIETY OF MEDICINE.

DERMATOLOGICAL SECTION.

MEETING held on May 17th, 1917, Dr. J. H. STOWERS, President of the Section, in the Chair.

Dr. S. E. DORE showed a case of *Lichen planus with unusual features*. The patient, a man, aged 40 years, had suffered from attacks of Lichen planus for many years, and about twelve years ago, when he attended Westminster Hospital under the late Dr. Colcott Fox, a section was made from his skin by Dr. Adamson. He had now typical Lichen planus papules around his waist, in the areas of pressure due to his truss, but he had brought him on account of another eruption, which he had had on the left lower abdomen for about a year. This consisted of closely aggregated, discrete, shiny, convex, follicular papules, somewhat indistinct when viewed by artificial light, but quite definite and characteristic by daylight, each follicle being picked out by a miliary papule, rounded in outline, and of a reddish-brown or bronze colour. The papules were uniform in shape and size, and did not possess the peculiar grouping, colour, or configuration of Lichen planus papules, nor coalesce to form patches as in that disease. He had seen a similar eruption on the abdomen before in two or three cases, but not in association with Lichen planus. He had not seen the condition described. He brought the case in order to obtain the opinion of members as to its nature, and whether it was a follicular hypertrophy associated with the Lichen planus, or a separate and distinct eruption. There were also some large patches of brownish-yellow discoloration on the extensor

surfaces of the forearms and on the inner and upper aspect of the left thigh, which the patient stated were the result of a condition similar to that on the abdomen. With the exception of slight irritation, he did not suffer inconvenience from the eruption.

The PRESIDENT said he was familiar with the appearance of the eruption, but did not anticipate that it would assume the typical features of Lichen planus papules.

Dr. ADAMSON thought the case presented no unusual features. They were all familiar with the association of follicular papules with Lichen planus under the name, first employed by Dr. Pringle, of Lichen plano-pilaris. Whether the follicular papules were of the Lichen spinulosus type, or the large papules with horny plugs called Lichen acuminatus, or small papules without spines, as in Dr. Dore's case, seemed to him merely a question of degree.

Dr. GRAHAM LITTLE said the eruption on the abdomen to which Dr. Dore drew attention was as characteristic of Lichen planus as were the lesions on the back. It was impossible to draw a hard and fast line in a disease characterised by such protean forms of eruption.

Dr. MACLEOD said that as soon as he saw it he connected the eruption on this man's abdomen with Lichen planus. He agreed with Dr. Dore that the papules were different from those of Lichen spinulosus.

Dr. DORE (in reply) said he could not agree with Dr. Adamson's opinion that this was a common condition frequently met with in association with Lichen planus; the papules had not the well-known character of that disease, they were not acuminate like those of Lichen spinulosus, there were no spines nor follicular plugs, and it was unlike any eruption he had seen described as "Lichen plano-pilaris" or simple lichenification. It was not, in his opinion, commonly observed either with or apart from Lichen planus, and he was inclined to regard it as a distinct eruption.

Dr. S. E. DORE showed a case of *multiple soft moles*. The patient, a man, aged 41 years, had a large number of tumours, varying in size from a millet-seed to a large pea, scattered over the face, chin, and scalp. There were about fifteen on each side of the face and forehead. They were soft, rounded, sessile growths, of the same colour as the skin. He had noticed them for about five years. There was also a much larger tumour on the scalp, which he took to be a sebaceous cyst. One of the growths was removed, and a section showed the characteristic structure of a mole. He was treating them with solid carbon dioxide, and several of the smaller ones had been removed. The report on the section, received from Dr. Braxton Hicks, was as follows: "Surface epithelium much thinned, but papillae hypertrophied. General hypertrophy of sebaceous glands. Subepithelial connective tissue much fibrosed, and the interstices

filled with polygonal, spheroidal, and spindle-shaped cells. General appearances those of a soft mole, but clinical history of importance in this case. No appearances of a secondary deposit."

Dr. W. KNOWSLEY SIBLEY showed a case of *Lymphadenoma cutis*. The patient was a male (gamekeeper), aged 49 years. He showed this case in its earlier stages, on October 19th, 1916. He then had had a papular eruption on the shoulders, forearms, face, hips and legs dating back nine years. Recently he had had obviously enlarged glands, mostly in his groin and axillæ. On the former occasion a section of one of the skin papules was taken, and Mr. McDonagh concluded from that section that it was *Lymphadenoma cutis*, and in the discussion it was suggested that one of the glands should be excised and examined. A section from a gland from the right groin was now shown, and Mr. McDonagh had given a description of it. The patient was now in hospital, and he was giving him increasing doses of arsenic: he is now on 12 minims of liquor arsenicalis three times a day. There was no doubt the rash had very much lessened; whether it was the result of rest in bed, or the arsenic, he did not know. The upper eyelids were badly affected, and the right one suppurated. The blood count varied very much.

Blood counts.—November 2nd, 1916: Hæmoglobin, 90 per cent.; red cells, 5,860,000 per cubic millimetre; white cells, 5400 per cubic millimetre. Differential count: Polymorphonuclears, 65 per cent.; mononuclears, 7 per cent.; small lymphocytes, 25 per cent.; eosinophils, 2 per cent.; basophils, 1 per cent. November 30th, 1916: Red blood cells, 5,600,000; white blood cells, 5300; polymorphonuclears, 35.5 per cent.; mononuclears, 5.0 per cent.; lymphocytes, 33.5 per cent.; eosinophils, 23.5 per cent.; basophils, 2.5 per cent. May 4th, 1917: Hæmoglobin, 93 per cent.; red blood cells, 5,400,000; white blood cells, 5100; polymorphonuclears, 44.25 per cent.; mononuclears, 12.75 per cent.; small lymphocytes, 23.75 per cent.; eosinophils, 13.75 per cent.; basophils, 3.75 per cent.; transitional cells, 1.75 per cent.

Histology of lymphatic gland (by Mr. J. E. R. McDonagh).—"The predominating cell is the plasma cell; indeed, there are very few lymphocytes in the section at all. Here and there plasmolysis has occurred with a few plasma cells, but as far as can be ascertained, since the section is stained with hæmatoxylin and eosin, the nuclei are

not dividing and the nucleoli show no activity. There are a few aminoplasma cells. Sparsely distributed in the section are some eosinophil cells. The endothelial cells appear to be somewhat degenerated, but they show no nuclear nor nucleolar activity. The section is a typical one of non-malignant aleukaemic lymphocytoma of the plasma-cell type."

Dr. F. PARKES WEBER supposed that Dr. Sibley regarded this case as one of Hodgkin's disease. Hodgkin's disease (by which term he meant the same disease as Lymphogranulomatosis maligna) was, he believed, one of the most fatal, and he would be glad to see an undoubted example of it which had been cured. A case might go on for six or seven years, and then the abdominal viscera often became involved and the patient died miserably. When, in this disease, a lymphatic glandular tumour in the neck or axilla was treated by X-rays, it seemed sometimes to precipitate the visceral complications, so that death sometimes came even sooner than without that treatment. Was Dr. Sibley's case really an example of Hodgkin's disease (Lymphogranulomatosis maligna), or an example of an aleukaemic (aleucoeythæmic) stage, or type, of leukaemia (such as was formerly termed "pseudoleukaemia"). He had never seen a condition of the skin resembling that in the present case occurring in an undoubted case of Hodgkin's disease, but such conditions of the skin (with very little itching) did certainly occur in leukaemia and "pseudoleukaemia" (*i. e.* in the aleucoeythæmic stages and types of leukaemia).

Mr. McDONAGH pointed out that some time ago* he had suggested for this condition the name of "cutaneous aleukaemic lymphocytoma." He considered the condition the same as Hodgkin's disease, with the differences that, in the latter, the disease commenced primarily in the lymphatic glands, and that the inflammation was generally of a more malignant nature. The histology of the skin and lymphatic glands in no two cases of cutaneous aleukaemic lymphocytoma was the same, and in some cases it was absolutely indistinguishable from that usually found in Hodgkin's disease. The disease might be inflammatory or malignant: it might attack the lymphocyte, or its progenitor, the endothelial cell, or its offspring, the plasma-cell. Neither the aleukaemic lymphocytomata of skin or of lymphatic gland origin were, except on very rare occasions, accompanied by a leukaemic blood picture, the usual change being merely a relative increase of the eosinophil cells. When leukaemic changes occurred in the blood it signified that the bone-marrow was involved, and the condition, leukaemic lymphocytoma, was in his opinion the same as the two types above mentioned, with the difference that the disease primarily affected the bone-marrow. Cutaneous aleukaemic lymphocytomata might run an extremely insidious course, or soon prove fatal, and he had never yet seen a case recover. In the course of the disease there might be frequent and periodic rises of temperature, and septic eruptions simulating furunculosis, Impetigo contagiosa, etc. When a case was complicated by sepsis there was usually an absolute and a relative increase of the polymorphonuclear leucocytes.

* *Brit. Journ. Derm.*, 1914, xxvi, pp. 283, 337.

Dr. GEORGE PERNET showed a case of *iodide eruption*. The patient, a woman, aged 34 years, came under observation on May 15th for an eruption involving the greater part of the arms and the upper third of the forearms, of six weeks' duration. The extensor surfaces were mainly affected, especially about the elbows. The lesions were polymorphous, ranging from small, yellow-topped papules to oval and circular vegetating and crusted ulcerations 1 in. across and over. The latter were situated chiefly on the elbows and their neighbourhood. The smaller non-ulcerated lesions were characteristic, and were situated more peripherally. There was also a single crusted lesion on the right cheek about $\frac{1}{4}$ in. across. No other parts of the body were affected. It was elicited from the patient that she had taken three-quarters of a large bottle of a "blood-mixture" on account of some slight and irritating skin trouble about the outer side of the right arm. Blood-mixtures sold over the counter contain iodide of potassium, as was well known. The woman was pale, and had only recently experienced great mental distress owing to the loss of her husband in the war, hence her lowered resistance. The case was shown on account of the severity of the eruption and its unusual distribution.

Dr. E. G. GRAHAM LITTLE showed a case of *Acne scrofulosorum* and *Lichen scrofulosorum*. The patient was a little girl, aged 5 years. She had had the eruption on the legs for six months; that on the trunk was of later date. The legs were closely covered from the foot to the knee by a typical eruption of *Acne scrofulosorum*, the papulo-necrotic tuberculide of Colcott Fox. The abdomen and back were extensively occupied by a nearly continuous sheet of eruption of follicular papules typical of *Lichen scrofulosorum*. The glands in the neck were greatly enlarged, and the abdomen was swollen and prominent, probably from enlarged mesenteric glands. No definite evidence of fluid could be detected in the abdominal cavity. There was obvious pulmonary tuberculosis, and the child had wasted considerably in the last few months. The mother had suffered from tuberculosis of the lung for many years, contracted before her marriage. The combination of *Lichen* and *Acne scrofulosorum* was excessively rare, but it was not uncommon to find one or other of these eruptions in association with glandular or pulmonary evidence of tuberculosis, as in this instance.

MEETING held June 21st, 1917, Dr. J. H. STOWERS, President of the Section, in the Chair.

Dr. GEORGE PERNET showed a case of *maculo-anæsthetic lepra*. The patient was a man, aged 52 years, who had been to West Africa for fifteen years at intervals, staying there, on the Gold Coast and up country for a year at the time. About two years ago a small round spot appeared on the middle of the left cheek and gradually enlarged centrifugally. It was now about the size of a florin. A year ago the left elbow became affected, where a large oval patch involving the lower part of the right arm could be seen. It presented an incomplete ribbon-like border of a pale bluish-violaceous tint enclosing an area that was paler than the normal skin beyond and very slightly atrophic to the eye and to touch. In the early stages this area was painful (hyperæsthetic) when he knocked the elbow. But when he saw him first on March 6th, 1917, the area exhibited distinct anæsthesia to usual tests, and also dissociation of sensation to heat and cold. There were also small circular patches on the right side of the face, forehead, neck, forearms, buttocks, and thighs. These appeared subsequently to the patch on the left elbow. The patient had also noticed numbness about the end of the left index finger. No definite swelling or enlargement about the ulnar, auricular, and external popliteal nerves could be made out, but on rolling the left ulnar nerve under the finger at the elbow it was found to be numb. Additionally, the patient stated he had had a recurrent eruption of watery blisters over the left buttock, but he had not seen them himself. He had had malaria, and four years ago syphilis, which was treated by salvarsan. About three months ago the Wassermann reaction was negative.

The serum squeezed out from a likely patch about the neck was examined (three preparations), but no acid-fast organisms were found.

The patient was having chaulmoogra oil by the mouth and intramuscular injections of benzoate of mercury, and had distinctly improved on this all round. He had lost the puffy swollen look of the face, the patches were paler, the elbow-area did not respond to tests quite as definitely as it did a little time ago (this might to some extent be subjective), and the general health had much improved.

Dr. P. S. ABRAHAM agreed with Dr. Pernet that this was an early case of leprosy. The lesions that the man showed, and the early history, quite fitted in with that diagnosis. It was interesting to him that the man had come from West Africa, because leprosy was not common among Europeans there; he did not know of any European case which had come from West Africa. Among natives, of course, it was very common there, as in most parts of Africa. The fact of not having found the bacilli in the early skin lesions was of no particular importance: Dr. Pernet had probably not looked for them in the nerve sheaths. Thirty years ago, at the Westminster Hospital, he had a case of a boy with apparently similar lesions; he was sent over from the West Indies by one of the best authorities on leprosy, the late Dr. Beaven Rake, who was under the impression that the disease was syphilis, not leprosy. Dr. Rake afterwards saw the boy with him at Westminster Hospital, and even then he adhered to that opinion. They could not find any of the bacilli in the scrapings from the erythematous patches. He put the patient under tuberculin, and he seemed to improve immensely, so that at the time he thought they were going to have a cure of leprosy by tuberculin. He subsequently went to a boarding-school in the country, where the disease gradually developed, and the lad became so badly disfigured that they could not keep him in England. Dr. Unna, of Hamburg, then took charge of him, thinking he would cure him with baths of hydrochloric acid and other measures, but he did not: the boy became insane, and they had the greatest difficulty in getting him back to the West Indies. He died there, some ten years after the disease started. He advised Dr. Pernet to try gynocardate of soda, by injection, for this case. A case was seen by a member of the Section two years ago, and was diagnosed as a tuberculide of the face, the patient being an English lady who had for many years lived in India. Since coming home she had developed numerous small erythematous swellings on the face. He was sure it was leprosy, though he had not found the bacillus. She had improved very much under gynocardate of soda.

Dr. PERNET (in reply) said he knew of the gynocardate of sodium intravenous method advocated by Sir Leonard Rogers, but that he was holding in reserve.

Dr. E. G. GRAHAM LITTLE showed a case of *cystic rodent ulcer of the ear and cheek*. The patient was a man, aged 51 years, and his history was that while yachting off Morocco some six years ago he was bitten by some fly on the lobe of the right ear. There was swelling and much irritation immediately after the bite, and from this beginning developed the condition now shown. The lobe of the ear, the lower and anterior floor of the concha leading to the meatus and right up to its entrance, and the contiguous border of the cheek in front of the lobe were the seat of a continuous sheet of cystic elevations varying from the size of a split pea to that of a fine pinhead, the site so affected being very slightly raised above the level of the skin. At the lower end of the lobule, which was considerably swollen, the cysts were

largest, and here there was further a small superficial erosion. There was also a deep induration underlying the portion of the affected skin on the cheek, a hard oblong swelling about $\frac{1}{2}$ in. by $\frac{3}{4}$ in. in size being felt there. There were no subjective sensations in connection with these lesions, but bleeding from the small ulcerated area was somewhat free at times. There was no glandular enlargement in connection with the site affected.

He suggested the diagnosis of a cystic rodent ulcer, an admittedly rare variety of the disease, but he had seen a very similar but much larger growth of this character, which also occurred in a very uncommon position—the middle of the back of the trunk. In that case the diagnosis was settled by the characteristic histology. This latter patient was seen by him eleven years ago, and the growth had receded rather than advanced in that long time, apparently as the result of continuous applications of salicylic acid plasters, which he prescribed with a view to softening the area as a preliminary to further measures. These the patient declined, satisfied with the result of the plasters alone, and he had recently reported himself as still satisfied with the treatment.

Dr. MACLEOD thought it was a superficial cystic rodent.

Dr. F. PARKES WEBER showed a case of *syringomyelic affection of two fingers*. The case illustrated a lesser form of syringomyelia than those associated with "cheiromegaly" and the so-called Morvan's disease (or, as Charcot called it, the "Morvan type of syringomyelia"). The symptoms appeared not to be quite stationary, and might therefore merely represent a stage in the development of a more advanced form of the disease characterised by one of the above-mentioned conditions of the hands.

The patient, M. W—, a well-nourished young woman, single, aged 20 years, complained of "uselessness" of the index and middle fingers of the right hand. The "uselessness," or what she spoke of as "uselessness," was due to the fact that in both these fingers, from near the metacarpo-phalangeal joints to their tips, she had practically complete loss of sensation. This could not be called "a dissociated anaesthesia" in the usual sense of the term, as in addition to loss of simple tactile sensation there was no perception of temperature or pain; deep firm pressure was all that the patient could feel in the

affected fingers. The fingers in question were often cold when the others were hot, and sometimes they went white at the tips. A similar kind of anæsthesia was present in the tip of the great toe of the left foot.

He could find nothing else abnormal about the patient, excepting very slight spinal scoliosis and bilateral exaggeration of the knee-jerks. The plantar reflex was of the ordinary flexor type in both feet. No ankle clonus could be obtained. The pupils were of medium size, round and equal, and reacted promptly to light and accommodation. There was nothing of special medical interest in the family history, excepting that her father and her paternal grandfather were both said to have suffered from "cramp in the hands." She was born in England (Stratford, Essex), and had never been out of England. She had mostly enjoyed good health, and was now employed as a clerk in a business office (cashier's department). Menstruation commenced at the age of 14 years, and was regular. The anæsthesia in the right middle finger was first noticed when she was about the age of 14 years, and in the index finger a year or two later, when she was aged 15 to 17 years. The sensory disturbance in the left great toe seemed to be of only three months' duration. She had had no whitlows nor "festerings" in the fingers or toes, but at about the age of 18 years she burned her right index finger by mistake, without feeling any pain. Quite recently she had sometimes had pain on the ulnar side of the right upper extremity, from the shoulder-joint to the hand. Röntgen-ray examination showed absence of cervical ribs on either side, and skiagrams of the hands showed nothing abnormal; there was no bone-atrophy or other osseous change in the affected fingers.

In some respects the case may be contrasted with the pronounced example of the Morvan type of syringomyelia shown by Dr. G. Pernet at the meeting of the Section on March 15th, 1917.*

Major GRAY remarked that when Dr. Pernet showed a case there two or three meetings ago, he expressed the opinion that the thickening in the fingers in cases of syringomyelia was probably due to a lymphangitis set up by trauma in the finger, and Dr. Parkes Weber said that was not so, and that cases had been shown in which the thickening was independent of local infection. But it seemed to him that when a case had been going on a long time, the opportunities for infection must have been very numerous, and it was difficult to exclude the

* *Brit. Journ. Derm. and Syph.*, 1917, xxix, p. 127.

possibility of septic infection. He asked whether any work had been done on the pathology of the thickening of the fingers. What were the changes, and how were they set up?

Dr. PARKES WEBER (in reply to Major Gray) said that in the joint and bone disturbances of syringomyelia, in which there was no wound nor infection at all, a notable feature was the hypertrophic tendency, which was more decided than in the analogous joint and bone disorders of tabes dorsalis (tabetic arthropathy and tabetic osteo-arthropathy). When the soft parts of the hands were affected in the Morvan type of syringomyelia there was likely to be a similar hypertrophic tendency shown, even when there had been no wound nor infection of the skin to induce the formation of new connective tissue.

Dr. J. L. BUNCH showed a case of *syringocystoma*. The patient, a woman, aged 27 years, had a number of pinkish, raised lesions on the chest below the clavicles, varying in size from a millet-seed to a pea. They had made their appearance during the last two years, and were gradually increasing in number and size. They caused hardly any subjective symptoms. The lesions were papular or follicular, and hard to the touch; there was no definite sensation of elasticity. Sections showed a mass of connective tissue and dilated sweat ducts, with a well-marked cyst in the subepithelial tissue. There was an entire absence of epithelial downgrowth, or of scattered epithelial cells in the tissue below the epithelium. Sections showed no pigment cells. The essential lesions were obviously a cystic change, or degeneration of the sweat glands. The sections showed, in his opinion, no resemblance to epidermal inclusion cysts.

The question of treatment involved, he took it, individual destruction of the lesions.

Dr. PERNET said that in a case of the same kind* he curetted the growths with a sharp spoon under an anæsthetic, and the patient had done very well.

The PRESIDENT thought that, apart from X-ray treatment, which was uncertain in its results in such a case, electrolysis or the application of CO₂ would prove efficient. He had seen good results from these methods in a similar case.

Dr. GRAHAM LITTLE said that while he admitted that the clinical aspect of this case justified its classification with the disease first described by Darier and Jacquet under the name "*Hidradénomes éruptifs*," he was not entirely convinced by the inspection of the single section shown that this diagnosis was corroborated. The nomenclature of this group of diseases (for it was at least probable that diverse affections had been confused and described under names now

* Pernet, "*Nævi cystepitheliomatosi disseminati (Lymphangioma tuberosum multiplex of Kaposi: Hidradénomes éruptifs of Jacquet and Darier)*," *Brit. Journ. Derm.*, 1907, xix, p. 67.

regarded as more or less synonymous) should be revised, and as experience shows that it was impossible to differentiate, clinically, members of the group, more reliance must be placed on the demonstration of histological differences. On this basis it was at once apparent that this case was not an example of Epithelioma adenoides cysticum, for there were no downgrowths of epidermis so characteristic of that disease. Nor, in his opinion, should it be described as a syringocystadenoma, or syringoma, for as far as one could judge from a very imperfect examination of a solitary section, the single cyst seen in that section was quite superficial, almost impinging on the epidermis, its contents stained like horn-cell debris, and its wall consisted of epithelial cells indistinguishable from those of the epidermis. In fact, from the histological appearances he would suggest the possibility of this being another example of the very rare condition of which he reported a case—namely, multiple inclusion cysts of the epidermis.* In the case he described there were hundreds of tumours whose nature was completely obscure until the histological examination demonstrated their character. Tumours of the sweat glands and sweat ducts occurred; and the term "syringoma" was a convenient one by which to describe these; it seemed to him undesirable to use up that term for conditions in which a connection with the sweat apparatus was not demonstrated. He did not think this connection was as yet demonstrated here, and he would ask Dr. Bunch for some further histological investigation before affixing this label to his most interesting case.

Mr. J. E. R. McDONAGH said that both clinically and histologically this case was in his opinion a typical one of syringoma, or syringocystadenoma. The term "Lymphangioma tuberosum multiplex" used to be applied to it, because what were now recognised as sweat ducts were erroneously thought to be lymphatics.

Dr. J. M. H. MACLEOD showed a case of *dysidrosis in a girl with hemiplegia, most marked in the paralysed hand*. The patient was a girl, aged 14 years, with partial left hemiplegia. Before coming to the Skin-Department at Charing Cross Hospital she had been under the care of his colleague, Col. Gordon Holmes. According to the statement of the mother the patient had had two strokes when she was aged ten months; these were followed by an almost complete hemiplegia of the left side, which had cleared up to some extent, but was still well marked on the left shoulder and left arm, which were much wasted. At present she had an attack of dysidrosis of the hands, very much more marked on the paralysed than on the healthy side. There, practically, the whole hand was covered with blisters, some of them as large as a penny, while on the healthy side the dysidrosis was characterised by a few groups of small, deep-seated vesicles between the fingers. On the healthy side the dysidrosis responded readily to treatment, while on the paralysed side it was

* *Proceedings*, 1915, viii, p. 253.

proving most intractable. Two years ago she had a similar attack, and, according to Col. Gordon Holmes's notes, it behaved in the same way.

Dr. F. PARKES WEBER thought this case was of extreme interest, and a question which arose was, What was the nature of the so-called "strokes," of which the patient had two when she was aged about ten months? He thought that they probably formed part of a single illness, and that the illness was a severe form of polio-encephalomyelitis, or the Heine-Medin disease—in other words, a form of infantile paralysis. The ordinary form of this disease attacked the anterior (motor) horns of the grey matter of the spinal cord (acute anterior poliomyelitis), and not the brain. It was this form from which, he believed, the patient suffered, and not from polio-encephalitis—in spite of the hemiplegic distribution of the paralysis. This view best explained the persistent muscular atrophy in the left hand and arm, and, inasmuch as the motor origins of the nerves have been permanently damaged, one could understand that the girl still had a tendency to trophic disturbances in the left hand. This also explained why she suffered during summer more severely from the results of hyperidrosis in the left than in the right hand; and the fact that she did so may be used as an argument that the original nervous disease was an attack of poliomyelitis, and not polio-encephalitis.

Dr. E. G. GRAHAM LITTLE showed a case of *linear Lichen planus of unusual extent in a child*. The patient was a girl, aged 9 years. The eruption began three months ago, and rapidly extended to occupy the present site. It consisted of a practically continuous line, about $\frac{1}{2}$ in. broad, made up of fairly typical Lichen planus patches and papules, beginning with a patch on the buttock, merging into a broad line down the back of the thigh and leg, and spreading out into a terminal patch on the inside of the foot. There were no lesions whatever elsewhere, either on the skin or mucosæ; the itching was moderate, and the general health was undisturbed.

Dr. GEORGE PERNET showed a case of *early Mycosis fungoides*. The patient was a woman, aged 47 years, housewife, who came under observation on June 8th last. She stated that the cutaneous trouble started six years ago, after the birth of a child, as reddened and irritable areas about the face and body, the first one appearing on the chin. These came and went at intervals for a time, and ultimately became established, the skin becoming involved generally about one year ago—rough, scaly, and reddened, and extremely irritable. Six months ago or so (about Christmas, 1916), small lumps began to make their appearance, especially on the limbs. These lumps broke down

centrally, and discharged more or less purulent substance. When first seen the skin trouble was generalised. The face exhibited shiny, glazed-looking, reddened areas. The neck, trunk and limbs were rough, with lichenisation, showing surface striations and quadrilations, with areas of flattened infiltration here and there. About the flexor surfaces of the forearms some of the small areas were distinctly of a Lichen planus type. The remains of a small broken lump could be seen here and there. Under treatment—viz. X-rays to the right arm and a soothing lead and calamine lotion—some improvement had taken place. The application of the lotion had much diminished the irritation. A citrate of soda mixture might have helped, too, in this direction. One feature of the clinical picture consisted in the areas of pigmentation, sprinkled with white atrophic spots, $\frac{1}{4}$ in. across or so, this giving rise to a vitiligo-like appearance. These areas were especially marked about the loins, where they were the size of two palmar surfaces or more. They were also present on the chest and elsewhere. There were infiltrations here and there in these areas, as well as on the lichenised parts. Urine: No albumen, no sugar. Father died at the age of eighty-two, and mother at the age of fifty-four.

The following is a report of the blood count: Hæmoglobin, 90 per cent.; white blood cells, 8600; red blood cells, 6,400,000; polymorphonuclear leucocytes, 85 per cent. (relative increase); large mononuclear leucocytes, 8 per cent. (relative increase); small mononuclear leucocytes, 5 per cent. (relative decrease); transitionals, 2 per cent.

It was proposed to deal with the case systematically by means of the X-rays—a sheet-anchor here—with the hope that the development of tumours might be prevented, and the evolution of the disease checked, if not cured, as cure seemed to be beyond their reach at the present moment. He did not propose to give any arsenobenzol treatment, as that appeared to have made matters worse in some instances.*

Dr. F. PARKES WEBER said that in the present case it was most important to make a "biopsy" examination of the affected skin (under the microscope), and

* *Vide* Pernet, "A Case of Mycosis Fungoides à tumeurs d'emblée Treated Unsuccessfully by Salvarsan and X-rays" (International Congress of Medicine London, 1913, *Trans. Derm. Sect.*).

likewise to make a blood count, especially a differential count of the white blood cells. He thought that it was only by these means that the clinical form of *Leukæmia cutis* described by Kaposi as "*Lymphoderma perniciosum*"—a leukæmic "permeation" of the skin with lymphocytes or other leukæmic cells whether accompanied or not by obvious leukæmic changes in the circulating blood—could be excluded.

Dr. GEORGE PERNET showed a culture of *monilia fungus* from a case of dermatitis of the feet. In scrapings from the deeper layers of the borders of a dermatitis of the feet, clinically like the usual ringworm in that situation, and occurring in an officer who had been in the trenches in Flanders, he had found, after some search in an extempore preparation in liq. potassæ B.P. (oc. 3, obj. 6), two groups or masses of round, spore-like bodies, with a central dot, looking something like *Tinea versicolor*, and quite different from what he had usually found in ordinary ringworm (*Tinea tropica*) of those parts. There was no trace whatever of mycelium. He was indebted to Dr. Sydney Graves, Acting Pathologist to the West London Hospital, for the culture on Sabouraud medium he was showing, and obtained from scrapings carefully gathered. Lieut.-Col. Castellani had identified it as a monilia. Further investigation, however, pointed to the non-pathogenicity of the fungus cultivated—that was, by cultures on various media.

CURRENT LITERATURE.

INFLAMMATORY AFFECTIONS.

COMMUNICATION ON ATROPHY OF THE SKIN. JOHANN FABRY.

(*Dermatologische Wochenschrift*, January 6th, 1917, Bd. 64, No. 1, p. 1.)

FABRY relates five cases of macular atrophy. (1) *Atrophia cutis maculata et striata*, associated with Lichen syphiliticus. In this case there was a widespread eruption of Lichen syphiliticus and while this eruption was present there were atrophic macules on the face and limbs, and striæ atrophicæ across the loins and buttocks. The macules formed the end-process of the exanthemata, but were fewer in number than the groups of papules. The striæ were more numerous than the exanthemata in that region and formed independently of the eruption. The macules and striæ continued to appear after the lichen had disappeared as the result of treatment. (2) Small papular syphilide in a tuberculous subject: subsequent macular atrophy. The macules were here the end-process of the exanthem and corresponded exactly with the extent of the efflorescence. (3)

Folliculis, with atrophy of the skin in a patient with latent syphilis. (4) Universal folliculis, with subsequent Atrophia cutis maculosa. (5) Macular atrophy after ecthyma.

Thus, in three cases the atrophy was associated with syphilis, and in two of these also with tuberculosis; in a fourth case with tuberculosis alone; and in the fifth neither with syphilis nor tuberculosis.

Fabry recalls that Jadassohn applied the term "Anetodermia" to all atrophic conditions of the skin due to loss of elastic tissue, and that he included in this group all anetodermias, whether post-syphilitic, after erythema, purpuras, etc., as well as the so-called idiopathic atrophy. Jadassohn, he says, rendered a great service when he sharply defined Atrophia maculosa and gave the name "Anetodermia erythematosæ," which at once suggests the different clinical stages and indicates the pathological anatomy.

Looking at Anetodermia circumscripta from a general standpoint the author distinguishes the following forms, according to their aetiology:

(1) Anetodermia erythematosæ of Jadassohn, or the well-known form of circumscribed atrophy. The first stage is inflammatory or erythematous, the second atrophic.

(2) Anetodermia circumscripta in relation with Recklinghausen's fibromatosis. (3) Anetodermia keloides of Rosenthal (*Ikongraphia Dermatologia*, 1914, Bd. 8, Tafel lviii). Scleroderma and white spot disease may be put here too.

(4) Anetodermia after adipositas and after pregnancy (*Striæ atrophicæ*).

(5) Anetodermia with dermatites such as erythema, purpura, ecthyma, Lichen atrophicus, Urticaria papulosa (Zieler).

(6) Anetodermia tuberculosa (folliculis, Erythema induratum of Bazin, and, according to Zieler, Lupus erythematosus).

(7) Anetodermialuetica, mostly in association with Lichen syphiliticus (according to Fabry's observation (1) Atrophia luetica may arise as a secondary syphilide alongside the micropapular exanthem).

Two forms may be described: (a) Atrophia cutis maculosa, (b) Atrophia cutis striata (or, as in Case 1, a combination of both forms). Atrophia cutis maculosa is not so rare as generally supposed, especially in association with Lichen syphiliticus and with Folliculis tuberculosa.

We must suppose in these cases that the elastic tissue is destroyed by a toxin. That this development is an exception is perhaps best explained by a special toxicity or by a heightened susceptibility. H. G. A.

[It is interesting to recall that Liveing was the first to note a "first stage" of so-called idiopathic macular atrophy as "one which is characterised by slight redness and by well-marked hypertrophy rather than atrophy."—*Diseases of the Skin*, fifth edition, 1887, p. 265.]

THE PRESENCE OF MENINGOCOCCI IN THE PURPURIC ELEMENTS OF MENINGOCOCCAL INFECTION. ARNOLD NETTER and MARIUS SALANIER. (*British Journal of Children's Diseases*, 1917, xiv, p. 101.)

NETTER and Salanier have been able to prove "that contrary to the generally received opinion" the cutaneous hæmorrhages of cerebro-spinal meningitis are not due to intoxication, but to the deposit of meningococci around the vessels

In two cases smears from vesicles, which developed upon purpuric patches, showed diplococci decolourised by gram and resembling coffee berries, exactly like those found in the cerebro-spinal fluid. The first case was one of meningococcal infection without meningitis, and in the second case the purpura preceded the symptoms of meningitis. Examination of smears from purpuric lesions is thus of great value in making an early diagnosis, and the information given is more constantly reliable and earlier than that obtained from blood-culture. The vesicles of herpes which may accompany cerebro-spinal meningitis do not contain the meningococcus.

H. G. A.

A CASE OF HYPERACUTE PURPURA WITHOUT CEREBRO-SPINAL MENINGITIS: RECOGNITION OF ITS MENINGOCOCCAL NATURE DURING LIFE BY MICROSCOPICAL EXAMINATION. ARNOLD NETTER, MARIUS SALANIER, and Mme. WOLFROM. (*British Journal of Children's Diseases*, 1917, xiv, p. 104.)

THIS was a further case of meningococcal infection, in which, in spite of the absence of vesicles, the meningococcus was found just as readily by mere scarification of the purpuric spots. In this case the patient, an infant aged 10 months, had high fever and widespread purpuric eruption and died after twenty-four hours' illness, although the cerebro-spinal fluid contained no excess of albumen; six leucocytes *re cubic mm.*; and no micro-organisms. "This purpura of fulminating course was, therefore . . . a purpuric form of meningococcus infection without meningitis," and "the interest of the findings in the purpuric patches, both from a diagnostic and therapeutic point of view, is obvious."

H. G. A.

CONTRIBUTION TO THE CLINICAL STUDY OF A DERMATO-EPIDERMATITIS AROUND OLD WOUNDS AND FISTULOUS OPENINGS. A. DESAUX. (*Annales de Dermatologie et de Syphiligraphie*, 1916-17, vi, No. 8, March, 1917, p. 393.)

IN December, 1915, M. Brocq suggested to Desaux the study of "a somewhat special dermatosis of aspect, contour, and evolution, simulating seborrhœic eczema" (a "parakeratose psoriasiforme eczématisée"), the extraordinary frequency of which around wounds of war and fistulæ had been noticed by him.

In its fully-developed stage the dermatitis forms a plaque, with sharp polycyclical margins, bordered by a collarette and encircled by an inflammatory zone. The plaque is of a vivid red colour, with abundant serous oozing, which, secondarily, becomes purulent and partly dries to form superficial crusts and a deeper grey adherent membrane. It extends peripherally "like an oily stain," disappears with antiseptic applications, is sometimes accompanied by glandular swellings, but never causes any general febrile reaction.

The eruption first appears around an old infected and suppurating wound as a collection of sero-purulent phlyctenules resembling the bullæ of impetigo, which become fused into a large plaque which is an exaggerated reproduction of the crusted lesion, which succeeds the destruction of the Impetigo bulla. It extends

with rapidity, so that the dimensions vary from a few centimetres to 20, 25, or 30 cm., and it may even cover the whole of an arm or leg.

In some instances the plaque may become the site of ulcerations, or a folliculitis may supervene on the patch itself or on the skin around and sometimes actual boils. In about one-third of the cases the plaques become less inflammatory and take on the aspect of Parakeratosis psoriasiformis (seborrheic eczema), and similar plaques may appear at the umbilicus, in the inguinal folds, and axillae, and on the scalp. Sometimes the affected part may become "lichenified." Pruritis is an early and sometimes persistent symptom.

Perrin, Brocq, and Sabouraud, who have studied these dermatoses, have regarded them as streptococcal impetigoes with secondary infection due to the golden staphylococcus, and the histological and bacteriological study made by Desaux has confirmed these conclusions. For the most part it is the streptococcus of the wound or fistula which produces the dermatitis by infecting the cicatrix traumatised by antiseptics, or the neighbouring skin which has been reduced to a state of lowered resistance by maceration, by fomentations, or possibly by X-ray examinations. The staphylococcus appears later and modifies the eruption, making it purulent. Eventually the streptococcus disappears and there is found only a diplococcus with porcelain culture, which is probably a modification of the golden staphylococcus, together with, in old eruptions, large forms of the polymorphic coccus of grey culture.

There is a photograph of the dermo-epidermatitis showing a large plaque with secondary patches and drawings of microscopical sections which show the collarette zone with papillary oedema, hyperacanthosis and separation of the horny layer by inflammatory serum, and the zone within the collarette with oedema of prickle-cell layer, hyperacanthosis, parakeratosis, and infiltration of polymuclear leucocytes.

H. G. A.

A STUDY OF LUPUS PERNIO AND ITS RELATIONSHIPS WITH SARCOIDS AND WITH TUBERCULOSIS. JÖRGEN SCHAUMANN (of Stockholm). (Illustrated.) (*Annales de Dermatologie et de Syphiligraphie*, 1916-17, vi, No. 7, p. 357, January, 1917.)

SCHAUMANN puts forward "a new conception of the pathogenesis of the disease." He believes that it is an entity of non-tuberculous nature, a view which has been held by other observers, but he makes the interesting suggestion that it belongs to the group of lymphadenomata, and proposes for it the name of "benign lymphogranuloma." It is not merely a skin-disease but attacks also the lymphatic glands, the tonsils, the bone-marrow, the lungs, and the spleen and liver. It bears no relation to the malignant disease of Hodgkin's except in its distribution in the organism. Boeck's cutaneous "sarcoid" he regards as the same disease, but the subcutaneous "sarcoid" of Darier-Rousy as an unrelated tuberculous manifestation.

He gives details of three characteristic cases of Lupus pernio which have been under his own observation. The patients were adults. Two of them presented the typical violet-coloured enlargements of the fingers and toes, together with dusky swellings of the nose and cheeks; the third patient had only the nose and cheeks involved, and not the fingers or toes. The violet swellings presented the

yellowish lupus-like nodules as is characteristic of this disease. In all three cases the lymphatic glands were enlarged, from the size of a pea to that of a bean or an almond, behind the ears, in the neck, axillæ, groins, or epitrochlear region. One case showed an enlargement of the liver.

Radiographic examination of the lungs revealed disseminated patches of shadow, although there were no clinical symptoms or definite signs of disease. Blood examination gave in all cases an increase of large mononuclear cells. In all cases reaction to tuberculin was negative.

Radiographic examination of the fingers and toes showed circumscribed foci of infiltration in the ends of the diaphyses in those fingers and toes which were swollen, and even in those clinically apparently unaffected.

Microscopical study of the skin lesions showed circumscribed "lupoid" nodules, made up of epithelioid cells and giant cells, and surrounded by an incomplete zone of lymphoid cells. In the lymphatic glands there was a new formation of tuberculoid aspect exactly analogous. The normal architecture of the gland was effaced by isolated and confluent "follicles" of epithelioid and giant cells enclosed by lymphathoid and plasma cells, and sometimes the whole gland tissue was replaced by fibroid tissue with a narrow marginal zone of epithelioid cells. The tonsils showed exactly similar foci in two cases and abundant plasma cells in the third. In no part was there necrosis, but some foci stained badly at their centre. No micro-organisms were found by any staining method. Negative results were obtained from animal inoculations.

The absence of reaction to tuberculin, the negative results of inoculations, the failure to find tubercle bacilli and granules, the absence of any sign of necrosis, all seemed to negative the diagnosis of tuberculosis, in spite of the tuberculoid character of the lesion from a microscopical point of view.

One patient presented a pruriginous eruption analogous to the eruptions seen in lymphadenoma, and one had enlargement of the liver, as in cases recorded by Bloch and by Licharew, in which both the liver and spleen were enlarged.

All these features, together with the increase in mononuclear leucocytes, the involvement of the bone-marrow, and the favourable effect of treatment by arsenic were in accord with the hypothesis of an affection of the lymphatic system. But the benign character distinguished them from Hodgkin's disease and suggested a specific infective granuloma.

A fourth case recorded by Schaumann was regarded by him as an example of cutaneous sarcoid of Boeck. In this case the patient, a woman, aged 34 years, presented on the right eyebrow, at the side of the right ala nasi, in the left temporal region, and on the right ear violaceous plaques, 2 cm. in diameter, and showing yellowish nodules on glass pressure. Histologically, the changes were similar to those of *Lupus pernio*, and the slightly enlarged glands behind the ear, below the maxilla, in the axillæ and epitrochlear showed tuberculoid foci. The blood changes, negative tuberculin reaction and foci revealed by X-rays in the diaphyses of the phalanges of apparently unaffected fingers all corresponded with similar findings in the cases of *Lupus pernio*, and Schaumann concludes that cutaneous sarcoid of Boeck belongs to the same disease, benign lympho-granuloma.

H. G. A.

OCCUPATIONAL DERMATOSES.

STUDY OF THE SO-CALLED "OELKRATZE," PRODUCED BY THE INDUSTRIAL USE OF MINERAL OIL AND TURPENTINE. R. TOTSUKA. (*Jap. Zeit. f. Derm. u. Urol.*, 1917, vol. xvii, p. 395.)

THE author has observed the action on the skin of certain oils used in the Osaka Arsenal. The eruption produced by mineral oil (petroleum) and machine oil is chiefly localised to the hair follicles, and hyperkeratotic changes, enlargement of the follicles, and thickening of the stratum Malpighii result. In the dermis small-cell infiltration, especially in the neighbourhood of the hair follicles, glands and blood-vessels are found. This is followed by atrophy of the glands, etc., of the skin.

Clinically, in the early stages an appearance like *Acne vulgaris*, particularly *Acne pustulosa*, is seen: later a form of *Acne keratosa* develops. The author recognises two stages: (1) An inflammatory stage, (2) a hyperkeratotic stage. With petroleum the first stage is short and quickly passes into the second. With machine oil the inflammatory stage is longer and then gradually passes into the hyperkeratotic. The inflammatory reaction in the dermis is more superficial with petroleum, with machine oil deeper and more chronic, consequently with the latter more comedones and nodules are seen.

With turpentine the disease begins as an acute diffuse eczema going on to a chronic circumscribed eczema, and if the use of the oil continues a general exanthem may develop. Histologically, inflammatory infiltration is observed in all layers of the skin. Later, hyperkeratosis, increase in the skin layers and atrophy of the glands follow.

Itching is absent or only slight with mineral oil, but scratch marks and lacerations are almost always present. With turpentine, however, itching is a marked feature.

Predisposition plays an important part in oil eruptions. The author finds turpentine dermatoses more common in women than in men. Age has no influence in this dermatosis, but with mineral oil 80 per cent. occurred between 20-30 years of age. Mineral oil dermatoses occur most commonly from winter to spring, when the wind in Japan is most dry; turpentine dermatoses are most common at the end of spring and early summer. In the case of turpentine workers, the eruption appeared within the first month of starting work in 65 per cent. of the cases, with petroleum 70 per cent. commenced within fifty days.

The falling-out of the hair in these dermatoses, especially with mineral oil, is due in the first place to a lessening of the elasticity of the hair by the oil and by frequent washing, later to atrophy of the hair root from hyperkeratosis of the hair follicle; for this reason the regrowth of hair is slower than in turpentine dermatosis.

The parts of the body free from hair (palms, sides of the fingers and soles) are never the sites of mineral oil dermatitis, although most frequently in

contact with the oil, showing that the oil only attacks the hair follicle. On the contrary, turpentine eczema is seen occasionally on the palms. Petroleum and the higher hydrocarbon groups produce more skin inflammation, the lower groups a hyperkeratotic dermatosis.

A. M. H. G.

TUBERCULOSIS.

FREQUENCY OF TUBERCULIDES IN INFANCY AND CHILDHOOD AND THEIR RELATION TO PROGNOSIS. T. C. HEMPELMANN. (*Archives of Pediatrics*, May, 1917, p. 362.)

A STUDY was made of 40 cases of tuberculosis in children showing papulo-necrotic tuberculides. Thirty of these were infants under two years of age and the other 10 were distributed through the period between two and twelve years. In a series of 130 cases of pulmonary tuberculosis in infants under two years of age, tuberculides occurred 30 times (23 per cent.). Sixty-two of these babies were in the first year of life, and of these 21 showed tuberculides (33·8 per cent.). Sixty-eight were between one and two years of age, and 9 of these (13·2 per cent.) showed tuberculides. In all but one of the 40 cases there was evidence of lung or tracheobronchial lymph node involvement in addition to the tuberculides. Tuberculides seem to bear no direct relation to prognosis, as some children now under observation showed tuberculides three, four, and five years ago.

S. E. D.

ANIMAL PARASITES.

THE TREATMENT OF SCABIES BY CHLORINE GAS. Capt. G. HERBERT CLARK and Capt. H. S. RAPER. (*Brit. Med. Journ.*, July 28th, 1917, p. 113.)

THE writers give an account of the treatment of scabies by chlorine gas which they adopted as the result of the improvement observed in cases exposed to the gas in training troops in the use of anti-gas measures. About sixty non-commissioned officers and men were exposed to a concentration of one to two parts of chloride per thousand of air, the service gas helmet being worn as a protection. Usually four exposures of five minutes' duration were given on successive days. A hot bath was taken before the first and after the last exposure. The officers wore box respirators and received exposures of twenty minutes to a concentration of between two and three parts of chlorine per thousand of air. The clothing and bedding were also placed in the "gassing chamber." The medical officer of the hospital reported not more than 25 per cent. as cured, although many of the cases not definitely cured showed much improvement. Of fourteen officers treated eleven were cured and three much improved, the more favourable results being attributed to the longer exposures and greater concentration of the gas. A feature of the treatment noted was the production of an irritable condition of the skin, especially about the scrotum and axillæ in some of the cases.

The authors suggest that the acarus is affected by the gas diffusing into the burrows, and that the action may be prolonged by the combination of the chlorine with the outer layer of the skin and its gradual liberation as hydrochloric acid.

S. E. D.

THERAPEUTICS.

ULTRA-VIOLET RAYS IN SKIN-DISEASES. F. WISE. (*New York Med. Journ.*, February 3rd, 1917, p. 196.)

THE writer attempts to give an unbiased estimation of the value of ultra-violet rays in dermatological practice, based upon his experience with the Kromayer lamp extending over a period of two and a half years. In his opinion treatment by ultra-violet light is of far less value to the dermatologist than either Roentgen or radium therapy, but there are certain skin-diseases which lend themselves more readily and conveniently to this method of treatment than to other remedies. Their employment frequently obviates the use of disagreeable external remedies. Obstinate cases of facial acne, for example, respond more readily to ultra-violet rays than to any other form of treatment, excepting X-rays, and can be treated without any risk. The author at first refrained from producing severe reactions, but experience showed that indifferent results were obtained until comparatively severe reactions were set up. In a case of papular parapsoriasis, for instance, no benefit resulted from mild exposures, but, in another similar case, intensive treatment with severe reactions entirely removed the eruption. A case of extensive angioma serpiginosum responded in a remarkable manner to intensive radiation, a dermatitis of considerable severity being found necessary. A case of chloasma of the forehead and cheeks yielded to a single exposure after a moderate reaction. The darkly pigmented hyperkeratotic skin in a woman with acanthosis nigricans also showed great improvement after large doses of ultra-violet light. In rosacea, seborrhœa oleosa, and acne of the face and back the ultra-violet light presents a large field of usefulness, but, excepting the very mild cases, it was found necessary to employ the usual external and internal remedies in order to bring about permanent relief. Three cases of acne varioliformis responded readily to the treatment for the time being, but relapses occurred as rapidly as when other methods were employed. In furunculosis the results were uniformly good, and no other remedy relieves the pain and tension of an indurated boil so quickly as ultra-violet light. Cases of lichen simplex chronicus, sluggish varicose ulcers, and subacute and chronic syccosis derived much benefit, the results in syccosis comparing very well with those obtained by radiotherapy. In chronic eczema the results were somewhat variable and inconstant. Two cases of psoriasis were treated, one successfully and the other without benefit. Of four cases of lupus erythematosus one was cured. Three cases of alopecia areata failed to respond, but in premature alopecia the rays proved to be a remedy of undoubted potency.

S. E. D.

PATHOLOGY.

CONCERNING THE BACTERIA IN THE SECRETIONS OF THE FACE IN MAN. Y. SAHAGUCHI. (*Jap. Zeit. f. Derm. u. Urol.*, 1917, vol. xvii, p. 132.)

IN an investigation of the secretion from the tip and alæ of the nose in 120 healthy persons, the author finds:

(1) In children, large numbers of bottle bacilli with no, or very few, acne bacilli.

(2) After puberty, acne bacilli are common, but few or no bottle bacilli.

This occurred equally among different nationalities and races. Acne bacilli are Gram-positive, non-acid-fast, short, thick rods lying in irregular groups in the secretion. They are $1-1.2\ \mu$ long and $\frac{1}{3}-\frac{1}{2}\ \mu$ wide, arranged in rows and often showing a mucous capsule.

Among the different forms of bottle bacilli, the author has twice noted mycelial threads and once a typical bottle bacillus budding. He believes that the bottle bacillus, on account of its budding and tendency to mycelial formation, is not a bacillus but a fungus.

In the comedo, as also in the physiological secretion, he found frequently among the typical old acne bacilli, feebly staining Gram-negative rods, which are probably identical with the bacilli, and which grow well on any medium both aerobically or anaerobically. Further, there were found in two cases still longer rod-like fungi $4-8\ \mu$ long, which ended in a point and showed no relation to the bottle bacilli.

A. M. H. G.

THE INFLUENCE OF ENVIRONMENT ON THE MORPHOLOGY OF THE ACNE BACILLUS. W. M. CROFTON. (*Dublin Journ. Med. Sci.*, June, 1917, p. 364. Read before the Section of Pathology in the Royal Academy of Medicine in Ireland on April 27th, 1917.)

THE influence of environment on morphology is well illustrated by the acne bacillus. The writer made slope cultures of sebaceous material from the skin on 2 per cent. glucose-agar and serum-agar and incubated them anaerobically. On the glucose-agar colonies of Gram-positive bacilli grew and also colonies of staphylococci; on the serum-agar only staphylococci grew. Thinking that the medium might have some influence on the shape of the bacillus, and that some of the colonies on the serum medium might be really those of short acne bacilli which looked like cocci, the author made a culture of the bacillus from the glucose-agar on to the serum-agar and incubated anaerobically. Only cocci grew. These cocci were then transferred to glucose-agar and only bacilli grew. The experiment was repeated several times with the same result. If the sebaceous material is sown on + 30 agar slopes and incubated anaerobically the growth of the skin staphylococci will, as a rule, be completely inhibited if the oxygen has been sufficiently removed. Towards the end of the week small colonies appear which increase in size until at the end of three weeks they are several millimetres in diameter. Their appearance is quite characteristic. When typical they have the shape of the male nipple, buff coloured in the centre shading

off to a creamy brown towards the periphery. If these cultures are now incubated aëroically, the colonies increase rapidly in size, but the new growth consists entirely of cocci surrounding the bacilli like a halo, or if the bacilli are subcultured on to + 30 or + 10 agar slopes and grown aëroically they grow as cocci, the colonies being indistinguishable from those of *Staphylococcus albus* as are the cocci themselves.

If the Gram-positive bacilli are subcultured on to + 30 agar and grown anaëroically they sometimes grow as Gram-negative bacilli, they also grow as Gram-positive cocci if grown aëroically. Even if grown anaëroically they will grow as cocci on + 10 agar. It is evident, therefore, that both anaëroic conditions and a suitable medium are necessary for the development of the bacillary form. The alternative possibility that staphylococci might survive in the acne bacillus colonies on the + 30 agar and develop under aëroic conditions is ruled out of court by the glucose-agar, serum-agar experiments, and by the fact that when the colonies are composed of Gram-negative bacilli no Gram-positive cocci could be seen on staining.

S. E. D.

GENERAL.

WAR DERMATOSES AND THE INFLUENCE OF WAR SERVICE ON SKIN DISEASES. Oberstabsarzt, Prof. GALEWSKY, 12th Army Corps. (*Derm. Woch.*, 1917, vol. liv, p. 385.)

THE author considers that only two groups of skin diseases can strictly be considered "war dermatoses": (1) *Staphylococcus* infections, and (2) pediculosis, scabies, and their complications. The first group covers all forms of impetigo, which is frequently complicated by ecthyma and ecthymatous ulcerations, especially on legs and buttocks; also furunculosis and folliculitis, the latter condition frequently occurring in the axilla. Sycosis of the beard is also common. Ecthymatous dermatoses frequently go on to eczema of the body and face; these cases often require months of treatment, though this is shortened by the use of X-ray therapy. Impetiginised secondary infection of chronic varicose eczema is also very troublesome. Impetigo of the scalp is often seen and requires careful cleansing and firm bandaging.

Pediculosis is not dealt with in this article as it has been frequently referred to by other authors. As regards scabies, the treatment usually employed consists of four rubbings with sulphur 17 per cent., calc. carb. 8 per cent., in forty-eight hours followed by a bath on the third day, after which the man is returned to his unit with zinc paste. Latterly the author has used with success Unna's "zimt-aldehydsagrotan," which he painted on six times in forty-eight hours.

Cases of horse mange have been observed; the symptoms are irregularly scattered, small, inflammatory papules surmounted by small crusts produced by scratching; eczematous groups often surround the lesions: the typical scabies distribution and burrows are absent and the acari are very difficult to find. This disease is usually produced by *Sarcoptes equi*, but the *Dermatocoptes* and *Dermatophagus equi* may occasionally produce the lesions. The treatment is the same as for human scabies.

Eczema marginatum (epidermophyton) is common and is best treated with "cignol-benzol," $\frac{1}{4}$ to $\frac{1}{2}$ per cent., painted on, or with lenigallol. Ordinary ring-worm is much less frequent in the author's experience, but other writers have seen it more often.

The author has had numerous cases of *Alopecia areata* among certain formations, and, although he can bring forward no proof, its occurrence in certain units suggests an infective origin.

The author then deals with certain dermatoses which are affected by war service. In the case of eczema only a few cases are unsuitable for service; severe cases of scrotal and anal eczema react unfavourably to service conditions. Cases of *Lichen chonicus* Vidal, which do not yield to X-ray treatment, are not fit for service. Also cases of recurrent eczema of the face, chronic hyperkeratotic palmar eczema, and eczema complicating ichthyosis are only fit for clerical work. Eczema associated with asthma also renders a man unfit for field service.

Varicose veins, if not of severe type, have stood the strain of the campaign better than was anticipated, but when associated with an itching dermatosis (pediculosis or scabies) render the subject liable to septic and ulcerative lesions of the legs. Only in this connection are varicose veins troublesome on active service.

Psoriasis is usually well borne, especially the favourable, latent type (Unna's "elbow psoriasis"). Cases of well-marked psoriasis on the trunk remain well for many months and are easily treated in hospital if they get worse. Only in a few severe cases and bad cases on the hands and face are the patients unfit for service.

The author has not experienced any bad effects on *Lichen ruber*, the cases which do get worse usually clear up with arsenical treatment. *Lupus erythematosus* cases have undoubtedly got worse in the field, even on the lines of communication. A considerable number of *Lupus vulgaris* cases were seen, many of them on the body and untreated. Those with actively spreading disease of the face and other disfiguring forms were not taken for active service.

The author then mentions rarer skin diseases which he has met with, and notes some of the skin complications of wounds, which require no special mention.

A. M. H. G.

QUARTERLY SURVEY OF DERMATOLOGICAL LITERATURE.

ERYTHEMAS, INFLAMMATIONS, ETC.

Atrophy of the Skin, A Combination of Diffuse with Macular (illustrated). F. KAUFMANN. (*Derm. Wochenschr.*, June 9th, 1917, Bd. lxiv, No. 23, p. 529.)

Comparative Examination of Varicella, Variola, Scarlet Fever, Measles, and Röteln. E. PASCHEN. (*Deutsch. Med. Wochenschr.*, June 14th, 1917, vol. xliii, No. 24, p. 746.)

- Cutis Capitis gyrata** (illustrated). ALFRED KRAUS. (*Derm. Wochenschr.*, June 23rd, 1917, Bd. lxiv, No. 25, p. 580.)
- Dermatitis Due to Explosives Used in Air Raids.** J. H. SEQUEIRA. (*Brit. Med. Journ.*, August 4th, 1917, p. 148.)
- Dermatitis Dysmenorrhoeica Symmetrica.** R. POLLAND. (*Arch. f. Derm. u. Syph.*, April, 1917, vol. cxxiv, Heft 89.)
- Dermatotypia** (Hand-prints in Dermatology). MORIZ-OPPENHEIM. (*Derm. Wochenschr.*, June 2nd, 1917, Bd. lxiv, No. 22, p. 497.)
- Dermo-epidermatitis occurring around Old Scars and Fistulæ**, Contribution to the Study of (illustrated). A. DESAUX. (*Ann. de Derm. et de Syph.*, 1916-17, vol. vi, No. 8, March, 1917, p. 393.)
- Eczema Marginatum (Epidermidophyton) in Prisons and Among Troops.** On the Extensive Occurrence of. SCHELLENBERG. (*Münch. Med. Wochenschr.*, May 22nd, 1917, vol. lxiv, p. 702.)
- Erythrodermia (Pseudo) Leucæmica** (Riehl). LEO RITTER v. ZUMBUSCH. (*Arch. f. Derm. u. Syph.*, April, 1917, vol. cxxiv, No. 71, p. 57.)
- Familial Perforating Ulcer of the Foot** (Familial Lumbal Syringomyelia?). F. SCHULTZE. (*Deutsch. Med. Wochenschr.*, May 3rd, 1917, vol. xliii, No. 18, p. 545.)
- Herpes Zoster in Tabes Dorsalis and General Paralysis of the Insane.** S. L. IMMERMAN. (*Journ. Amer. Med. Assoc.*, June 2nd, 1917, vol. lxvii, No. 24, p. 1607.)
- Herpes Zoster with Arsenic.** A Note on the Association of. HILDRED CARLILL. (*Brit. Med. Journ.*, July 7th, 1917, p. 9.)
- Herpes Zoster with Carcinoma of the Intercostal Nerve** (Histology, illustrated). F. WOHLWILL. (*Derm. Wochenschr.*, June 23rd, 1917, Bd. lxiv, No. 25, p. 569.)
- Leukæmia, Acute**, The Infective Theory of. GORDON WARD. (*Brit. Journ. of Child. Dis.*, January-March, 1917, vol. xiv, Nos. 157-159, p. 10.)
- Lichen Ruber Acuminatus.** E. FINGER. (*Arch. f. Derm. u. Syph.*, April, 1917, vol. cxxiv, Heft 1, p. 1.)
- Lipodystrophia Progressiva.** F. PARKES WEBER. (*Brit. Journ. of Child. Dis.*, April-June, 1917, vol. xiv, Nos. 160-162, p. 81.)
- Œdema of the Mouth, Pharynx, Tongue, and Epiglottis**, Due to Eating Brazil Nut. VIRGINIUS DABNEY. (*Journ. Amer. Med. Assoc.*, May 19, 1917, vol. lxviii, No. 20, p. 1476.)
- Peculiar Skin Condition occurring in Diabetes Mellitus**, Complicated by Pulmonary Tuberculosis (Vaso-motor Disturbance of Hands and Feet). JACOB ROSENBLUM. (*Journ. Amer. Med. Assoc.*, May 19th, 1917, vol. lxviii, No. 20, p. 1476.)
- Pellagra and Other Skin Affections**, The Differential Diagnosis of. CORBY SWANSON. (*Derm. Wochenschr.*, June 16th, 1917, Bd. lxiv, No. 24, p. 543.)
- Pellagra**, The Therapy of, Based on Eleven Hundred and Fifty Cases. GEORGE M. NILES. (*Med. Record*, June 2nd, 1917, p. 932.)
- Pellagra with Erythema of the Scrotum as an Initial Skin Lesion.** C. E. CROSBY. (*Journ. Amer. Med. Assoc.*, May 12th, 1917, vol. lxviii, No. 19, p. 1493.)

- Purpura without Cerebro-spinal Meningitis, A New Case of Hyperacute: Recognition of its Meningeal Nature during Life by Microscopical Examination.** A. NETTER, M. SALAMED, and Mme. WOLFROM. (*Brit. Journ. of Child. Dis.*, April-June, 1917, vol. xiv, Nos. 160-162, p. 104.)
- Purpuric Elements of Meningococcal Infection, The Presence of Meningococci in the.** A. NETTER and M. SALANIER. (*Brit. Journ. of Child. Dis.*, April-June, 1917, vol. xiv, Nos. 160-162, p. 101.)
- Scleroderma in Infants.** J. COMBY. (*Arch. de Méd. des Enf.*, June, 1917, vol. xx, No. 6, p. 318.)
- Varicella.** E. PASCHEN. (*Derm. Wochenschr.*, May 26th, 1917. Bd. lxiv, No. 4, p. 488.)
- Variola.** Remarks on the Early Diagnosis of. E. ALLARD. (*Derm. Wochenschr.*, May 12th, 1917, Bd. lxiv, No. 19, p. 442.)

TUBERCULOSIS.

- Primary, Secondary, and Tertiary Tuberculosis of Man.** (*Münch. Med. Wochenschr.*, March 6th, 1917, vol. lxiv, p. 305.)
- Skin Tuberculosis.** HANS MUCH. (*Derm. Wochenschr.*, June 9th, 1917, Bd. lxiv, No. 23, p. 524.)
- Tuberculides in Infancy and Childhood and their Relation to Prognosis, Frequency of.** T. C. HEMPELMANN. (*Archives of Pediatrics*, May, 1917, p. 362.)

PARASITIC.

- Dermanyssus Avium** (Bird Mite) (illustrated). JULIUS RAFF. (*Derm. Zeitschr.*, May, 1917, Bd. xx, No. 8, p. 130.)
- Favus of the Scalp and Eye-lids.** WALTER BAER WEIDLER. (*New York Med. Journ.*, May 12th, 1917, p. 887.)
- Human Anthrax.** JOSEPH B. BISSELL. (*New York Med. Journ.*, July 21st, 1917, p. 110.)
- Larva Migrans on the Mexican Border.** CHARLES PERLEY GRAY. (*New York Med. Journ.*, July 7th, 1917, p. 15.)
- Lice and Nits in Clothing or Blankets, A Simple Means of Ascertaining if a Sterilising Hut is Hot Enough to Destroy.** A. BACOT. (*Brit. Med. Journ.*, August 4th, 1917, p. 151.)
- Louse Problem, The.** HORACE C. HALL. (*New York Med. Journ.*, June 9th, 1917, p. 1071.)
- Sporotrichosis, Report of a Case.** A. A. SPOOR. (*Journ. Amer. Med. Assoc.*, May 26th, 1917, vol. lxvii, No. 21, p. 1548.)

NEW GROWTHS.

- Hæmagioendothelioma Tuberosum Multiplex and Lymphangioendothelioma Tuberosum Multiplex** (Lymphangioma Tuberosum Multiplex, Kaposi). (Additional to communication in *Archives*, Bd. cxx, Heft 1.) R. OESTREICH and E. SAALFELD. (*Arch. f. Derm. u. Syph.*, April, 1917, vol. cxvii, Heft 1, p. 124.)

- Myoma-cutis and Keloid Formation in Relation to Acrodermatitis chronica atrophicans.** J. SMILOVICI. (*Arch. f. Derm. u. Syph.*, April, 1917, vol. cxxiv, Heft 1, p. 77.)
- Pseudo-milium Colloid, or more exactly Conjunctivoma, with Hyaline Degeneration** (illustrated). G. MILIAN. (*Ann. de Derm. et de Syph.*, 1916-17, vol. vi, No. 8, March, 1917, p. 422.)
- Sebaceous Gland Affection, A Special (Seboecystomatosis) (illustrated).** H. GÜNTHER. (*Derm. Wochenschr.*, May 26th, 1917, Bd. lxiv, No. 21, p. 481.)
- Sebaceous Horn,** A. OSWALD VEVERS. (*Lancet*, July 14th, 1917, p. 53.)
- Syrigoma Circinosum.** O. NAEGELI. (*Arch. f. Derm. u. Syph.*, April, 1917, vol. cxxiv, Heft 99.)

PATHOLOGY.

- Acne Bacillus, The Influence of Environment on the Morphology of the.** W. M. CROFTON. (*Dublin Journ. Med. Sci.*, June, 1917, p. 364.)
- Aspergillus Fumigatus in the Subcutis of Guinea-pigs, On the Pathological Effect of.** R. CHABLE. (*Arch. f. Derm. u. Syph.*, April, 1917, vol. cxxiv, Heft 1, p. 14.)
- Circumanal Glands in Man, The Development of.** O. SPRINZ. (*Derm. Wochenschr.*, June 2nd, 1917, Bd. lxiv, No. 22, p. 503.)
- Industrial Poisons encountered in the Manufacture of Explosives.** ALICE HAMILTON. (*Journ. Amer. Med. Assoc.*, May 19th, 1917, vol. lxviii, No. 20, p. 1445.)
- Poison Oak, Non-bacterial, The Poisonous Principle of.** JAMES B. MCNAIR. (*Med. Record*, June 16th, 1917, p. 1042.)
- Sebum Stagnation after Dermatitis.** LEO RITTER v. ZUMBUSCH. (*Arch. f. Derm. u. Syph.*, April, 1917, vol. cxxiv, Heft 1, p. 47.)
- Shock (Anaphylaxis) (Disturbance of the Normal Hydrogen Ion Concentration).** J. E. R. McDONAGH. (*Practitioner*, July, 1917, p. 19.)
- Skin Capillaries and their Clinical Significance on the Observation of** (method illustrated). WEISS and MÜLLER. (*Münch. Med. Wochenschr.*, May 8th, 1917, vol. lxiv, No. 19, p. 609.)
- The Effect of Vaccinia on the Well-being of Children as judged by their Reaction to Subsequent Infections.** J. PARLANE KINLOCH. (*Lancet*, June 30th, 1917, p. 993.)
- Theory of the Action of Inorganic Salts on Cells—(1) Physical theories; (2) Chemical theories; (3) Colloid chemical theories.** EMIL LENK. (*Deutsch. Med. Wochenschr.*, June 7th, 1917, vol. xliii, No. 23, p. 725.)
- Trinitrotoluene, The Effect of, upon the Blood.** P. N. PANTON. (*Lancet*, July 21st, 1917, p. 77.)

TREATMENT.

- Acne Vulgaris:** Solarson (a soluble organic arsenic preparation), Staphylococcus Vaccine, and Röntgen-ray Treatment of. ERICH HOFFMANN. (*Deutsch. Med. Wochenschr.*, March 27th, 1917, vol. xliii, No. 13, p. 393.)

- Chaulmoogra Oil in Leprosy**, Preliminary Report, The Hypodermic Use of. A. N. BERCOVITZ. (*Journ. Amer. Med. Assoc.*, June 30th, 1917, vol. lxvii, No. 26, p. 1960.)
- Cignolin**, A Synthetic German Chrysarobin, and Laneps, a New Salve Basis. GALEWSKY. (*Deutsch. Med. Wochenschr.*, February 22nd, 1917, vol. xliii, No. 8, p. 238.)
- Coal Tar in Blennorrhœa Vaginæ**. WOLFF. (*Derm. Wochenschr.*, May 19th, 1917, Bd. lxiv, No. 20, p. 467.)
- Grafting with Frog Skin**. H. W. M. KENDALL. (*New Zealand Med. Journ.*, April, 1917, p. 44.)
- Granugenol** (granulating wound oil, Knoll) in Dermatology. O. BETTER. (*Derm. Zeitschr.*, October and November, 1916, p. 1 and p. 34.)
- Malignant Tumours**, The Rational Treatment of. TH. NOGIER. (*Journ. de Radiol. et d'Electrol.*, March-April, 1917, Tome iii, No. 8, p. 513.)
- Paraffin Treatment of Burns and other Open Wounds**. TORALD SOLLMANN. (*Journ. Amer. Med. Assoc.*, June 16th, 1917, vol. lxviii, p. 1799.)
- Paraffin**, Treatment of Skin Erosions with. E. B. HAWORTH. (*Journ. Amer. Med. Assoc.*, May 12th, 1917, vol. lxviii, No. 19, p. 1404.)
- Paraffin in Treatment of Wounds and Burns**. J. R. BEITER. (*Journ. Amer. Med. Assoc.*, June 16th, 1917, vol. lxvii, No. 24, p. 1801.)
- Rosaniline and Pararosaniline**. P. G. UNNA. (*Derm. Wochenschr.*, May 5th, 1917, Bd. lxiv, No. 18, p. 409.)
- Scabies**, The Treatment of, by Chlorine Gas. G. HERBERT CLARK and H. S. RAPER. (*Brit. Med. Journ.*, July 28th, 1917, p. 113.)
- Solitary Furuncle**, Treatment of. W. BARTLETT. (*Journ. Amer. Med. Assoc.*, June 23rd, 1917, vol. lxvii, No. 25, p. 1904.)
- Silver Combinations**, The Deep Action of. P. G. UNNA and L. GOLODETZ. (*Derm. Wochenschr.*, May 19th, 1917, Bd. lxiv, No. 20, p. 449.)
- Tuberculosis Treatment by Partigene** (Partial Antigen = the various chemical substances of tubercle bacilli). HANS MUCH. (*Derm. Wochenschr.*, May 12th, 1917, Bd. lxiv, No. 19, p. 433.)
- Vaccine Treatment**, Reflections on the Limitations of. ANDREW MACPHAIL. (*Lancet*, June 30th, 1917, p. 984.)
- Vlemeinykxs Solution as a Good Scabies and Pediculosis Cure**. OBERMILLER. (*Deutsch. Med. Wochenschr.*, February 22nd, 1917, vol. xliii, No. 8, p. 239.)

RADIOTHERAPEUTICS.

- A Few Words about the "New" Simpson Lamp**. H. L. HEUSNER. (*Deutsch. Med. Wochenschr.*, May 24th, 1917, vol. lxiii, No. 21, p. 657.)
- Acne**, The Röntgen Treatment of. H. E. SCHMIDT. (*Deutsch. Med. Wochenschr.*, May 10th, 1917, vol. xliii, No. 19, p. 592.)
- Deep Roentgentherapy and Electrocoagulation in the Treatment of Malignant Disease**. GEORGE E. PFAHLER. (*Interstate Med. Journ.*, July, 1917, p. 641.)
- Idiosyncrasy of the Skin to Röntgen Rays**. J. SCHÜTZE. (*Deutsch. Med. Wochenschr.*, March 29th, 1917, vol. xliii, No. 13, p. 401.)

- Perlèche: Its Bacteriology, Symptoms, and Treatment.** ARTHUR L. SMITH. (*Arch. of Pediatrics*, April, 1917, p. 274.)
- Plastic Induration of the Penis cured by Röntgen Rays.** GALEWSKY and WEISER. (*Derm. Wochenschr.*, June 16th, 1917, Bd. lxiv, No. 24, p. 538.)
- Radiotherapy of Diseases of the Skin** (apropos of M. Brocq's article). W. DUBREUILH. (*Ann. de Derm. et de Syph.*, 1916-17, vol. vi, No. 8, March, 1917, p. 389.)
- Radiotherapeutic Questions and Researches in the Fight against Carcinoma.** HENRI HIRSCH. (*Deutsch. Med. Wochenschr.*, April 26th, 1917, vol. xliii, No. 17, p. 522.)
- Radium and X-ray Therapeutics, The Modern Developments of.** JOHN MACINTYRE. (*Glasgow Med. Journ.*, May, 1917, p. 257.)
- Radium in Skin-diseases.** S. E. SWEITZER. (*Derm. Wochenschr.*, May 5th, 1917, Bd. lxiv, No. 18, p. 419.)
- Radium in the Treatment of Cancer, The Place of.** ROBERT ABE. (*Med. Record*, June 2nd, 1917, p. 931.)
- Ultra-violet Radiation: A Spectroscopic Investigation of Some Sources of Ultra-violet Rays.** CHARLES A. SCHUNCK. (*Lancet*, June 30th, 1917, p. 996.)

SYPHILIS.

- Annual Oration on the Campaign against Syphilis.** Sir WILLIAM OSLER. (*Lancet*, May 26th, 1917, p. 787.)
- Arsenophenylglyzin in Oily Suspension in Syphilis.** J. REENSTIORNA. (*Arch. f. Derm. u. Syph.*, April, 1917, vol. cxv, Heft 1, p. 114.)
- Bruck's New Sero Reaction.** Die Ergebnisse mit. K. SCHINDLER. (*Deutsch. Med. Wochenschr.*, April 12th, 1917, vol. xliii, No. 15, p. 467.)
- Bruck's Sero-Chemical Reaction in Syphilis.** LADISLAUS AUSZTERVEIL and JÓSEF KALLÓS. (*Deutsch. Med. Wochenschr.*, May 10th, 1917, vol. xliii, No. 19, p. 589.)
- Bruck's Sero-Chemical Reaction in Syphilis.** A. HAUPTMANN. (*Deutsch. Med. Wochenschr.*, April 19th, 1917, vol. xliii, No. 16, p. 490.)
- Hospital Opportunities and Responsibilities to the Syphilitic.** The. H. R. VARNEY. (*Journ. Amer. Med. Assoc.*, June 30th, 1917, vol. lxvii, No. 26, p. 1953.)
- Intraspinous Injections of Neo-salvarsanised Serum in Nervous and Mental Diseases.** ALFRED GORDON. (*New York Med. Journ.*, May 12, 1917, p. 873.)
- Intraspinous Medication in the Treatment of Syphilitic Disease of the Nervous System.** LEWIS M. GAINES. (*Med. Record*, June 16th, 1917, p. 1034.)
- Karl Bruck's Sero-Chemical Reaction in Syphilis.** O. BETTER and W. KOHNHEIM. (*Derm. Zeitschr.*, April, 1916, vol. xx, No. 7, p. 114.)
- Mode of Absorption of Mercury in the Inunction Treatment of Syphilis: Preliminary Report.** UDO J. WILE and J. H. ELLIOTT. (*Journ. Amer. Med. Assoc.*, April 7th, 1917, vol. lxviii, No. 14, p. 1024.)
- Multiple Chancres of the Lip.** E. P. ZEISLER. (*Journ. Amer. Med. Assoc.*, May 26th, 1917, vol. lxvii, No. 21, p. 1546.)

- Positive Wassermann Reaction as Sign of Infectiousness of Lues.** JOSEPH TRINCHESE. (*Deutsch. Med. Wochenschr.*, January 11th, 1917, vol. xliii, No. 2, p. 38.)
- Salvarsan and Intramine, with Reflections upon Chemo-Therapy.** J. E. R. McDONAGH. (*Lancet*, June 16th, 1917, p. 914.)
- Σ-I.** The Destiny of. B. P. SORMANI. (*Derm. Wochenschr.*, 1916, Bd. lxii, No. 17, p. 386; No. 18, p. 418; No. 19, p. 448.)
- Sero-Chemical Reactions in Syphilis, On the.** CARL BRUCK. (*Derm. Wochenschr.*, June 2nd, 1917, Bd. lxiv, No. 22, p. 516.)
- Spinal Fluid Findings in Syphilis, The Diagnostic and Prognostic Significance of.** JOHN A. FORDYCE. (*Med. Record*, June 2nd, 1917, p. 927.)
- Spread of Syphilis in the Male Civil Population of Budapest during the War.** L. TÖRÖK. (*Arch. f. Derm. u. Syph.*, April, 1917, vol. cxxiv, Heft 1, p. 83.)
- Syphilis and Pregnancy.** BURTON PETER THOM. (*Med. Record*, July 7th, 1917, p. 16.)
- Syphilis in Toulouse Region during Two Years of War, Note on the Diffusion of.** CH. AUDRY. (*Ann. de Derm. et de Syph.*, 1916-17, vol. vi, No. 8, March, 1917, p. 419.)
- Syphilis, The Modern Diagnosis and Treatment of.** B. A. THOMAS and CHARLES H. J. BARNETT. (*New York Med. Journ.*, May 12th, 1917, p. 879.)
- Syphilitic Reinfection Four Years After Salvarsan-Mercury Treatment.** PONTOPPIDAN. (*Derm. Wochenschr.*, June 16th, 1917, Bd. lxiv, No. 24, p. 540.)
- Two Cases of Late Congenital Lues.** HARRY APFEL. (*New York Med. Journ.*, June 2nd, 1917, p. 1032.)
- Wassermann Tests Done during 1916 in the Philadelphia General Hospital, Summary of the.** RANDLE C. ROSENBERG. (*New York Med. Journ.*, June 30, 1917, p. 1233.)
- Wassermann's Reaction.** LOUIS COBBETT. (*Practitioner*, July, 1917, p. 72.)

GENERAL.

- Dermatology in Relation to Child Welfare.** NORMAN WALKER and R. CRANSTON LOW. (*Edinburgh Med. Journ.*, June, 1917, pp. 396 and 401.)
- Military Service for Skin Diseases, The Discussion on.** P. G. U., TESIONEK, and MEIROWSKY. (*Derm. Wochenschr.*, June 9th, 1917, Bd. lxiv, No. 23, p. 522.)
- T. Colcott Fox, Obituary Notice by.** ALBERT KAUFMANN. (*Derm. Wochenschr.*, May 12th, 1917, Bd. lxiv, No. 19, p. 445.)
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REVIEWS.

SYPHILIS AND THE ARMY.*

THIS book is written as a manual for military medical officers, and is one of a series of books dealing with medical and surgical problems arising out of the war. It falls naturally into three parts. The first deals with the frequency of syphilis in the French Army; the methods by which the disease is spread; and its effects on the civil population and on the soldier. It is of interest in this connection to note that the author, together with other French syphilologists, have noted a remarkable increase in syphilis among married women and among youths.

The second part of the book deals with the symptoms and diagnosis of syphilitic lesions commonly observed in the Army; the treatment of the disease and the personal hygiene of the patient. The differential diagnosis of the primary lesion is extremely full, and the author's remarks on the "pseudo-chancere of syphilistics treated with arseno-benzol" will be read with interest by all who have to deal with this disease. The secondary manifestations of syphilis are described concisely and lucidly; but tertiary manifestations, as they are not common in the Army, are not considered in detail. Turning to treatment, after a detailed account of the various methods employed in administering the three principal anti-syphilitic remedies, the author describes a plan of treatment which he recommends for dealing with primary and secondary syphilis under war conditions. He advises a combined novarseno-benzol and mercury treatment, and is in favour of the intravenous administration of soluble salts of the latter drug. The technique employed is described in detail. The local treatment of the lesions and the general hygiene of the patient is also fully dealt with.

The third part of the book treats of prophylaxis and covers much of the ground recently dealt with by our own Royal Commission on Venereal Diseases, though the question of personal precautions has not been ignored.

The book is of convenient size and reasonable in price, and we know of no similar book in the English language. We can therefore heartily recommend it to all medical officers whether working in the field or dealing with syphilitic patients at home.

THE TREATMENT OF WAR WOUNDS.†

PROF. KEEN's report, prepared for the American National Research Council, is not exactly a dermatological work, but will nevertheless be read with interest by dermatologists, as it gives, in very concise form, the methods of wound treatment now in use in the field. The main interest lies in the nature and treatment of infected wounds. War has revolutionised our ideas of antiseptic surgery, and Prof. Keen shows very clearly the steps by which the modern

* *La Syphilis et l'Armée*. By G. THIBIERGE. (Collection Horizon.) Paris: Masson et Cie. 4 fr.

† *The Treatment of War Wounds*. By W. W. KEEN, M.D. Philadelphia and London: W. B. Saunders Co., 1917.

treatment has been evolved. From the evidence he produces, the Carrel-Dakin method appears to give the best results, provided the details of the technique are carried out with precision. These details are very fully described. A few notes are made on some of the more recent antiseptics—acriflavine, proflavine, brilliant green, and mercurophen—but the author notes that sufficient evidence of their value has not yet been accumulated.

Chapters on tetanus, gas infection and gas gangrene, and on burns, as well as on regional wounds, complete the work; and particularly important is the report of work on an antitoxin against gas infection.

The author has relied largely on the reports of well-known surgeons working in the area of the armies, extracts of letters from these being given in an appendix, and Prof. Keen is able, from his personal experience, to contrast modern methods of war surgery with those that prevailed at the time of the American Civil War.

BOOKS RECEIVED.

Diseases of the Skin. By Sir MALCOLM MORRIS, K.C.V.O. Sixth Edition. Pp. 770; 10 colour and 72 black and white plates. London: CASSELL & Co. Price 12s. net.

Three Clinical Studies in Tuberculosis Predisposition. By W. C. RIVERS. Pp. 272. London: GEORGE ALLEN & UNWIN, Ltd. Price 12s. 6d. net.

Diseases of the Skin. By H. W. STELWAGON, M.D. Eighth Edition. Pp. 1276; 33 plates and 356 illustrations in text. Philadelphia and London: W. B. Saunders Co., 1916. Price 28s. net.

The Treatment of War Wounds. By W. W. Keen, M.D. Pp. 163. Philadelphia and London: W. B. Saunders Co., 1917. Price 7s. 6d. net.

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A CLINICAL STUDY OF SOME PYOGENIC LESIONS
OBSERVED IN FRANCE.

By W. H. BROWN, M.D., CAPT. R.A.M.C.(T.C.).

It is a well-recognised fact that during war-time new disease conditions arise with which we are unfamiliar, and that known conditions alter in type and character. This change is most probably due to the altered conditions of life; the physical and mental strain which must necessarily tax the resisting powers of the body to the utmost. This applies in the domain of dermatology as in the diseases of the other systems, and I think that other medical officers dealing with skin diseases will agree with me in this matter. For example, there is an intractable type of *Seborrhoea corporis et capitis* subject to frequent relapses with secondary pyogenic infection; there is the unusual complication of adenitis of the groin in scabies when there is no secondary infection to account for it; there are various types of impetigo which present features not commonly seen in civil life.

The type of infection I wish to confine myself to is the infective streptococcal condition so commonly met with on the buttocks and lower limbs, a type which causes a great deal of destruction of tissue and which is a great source of wastage to the Army.

It is a form of impetigo which requires to be clearly differentiated from the milder condition met with so frequently on the face and

head, although both are of streptococcal origin. This difference may be partly explained by the situation on the lower limbs and the consequent much greater exposure to irritation by dirt and perspiration. The initial microscopic lesions may be the same in both cases, but by the time they become macroscopical there is a distinct clinical difference which becomes more marked as the lesions enlarge. Impetigo as it commonly affects the head and face amongst the soldiers on active service is practically identical with that observed in children in civil life, though, as a rule, it is more intractable to treatment and more acute. The initial lesion is a clear or opalescent vesicle which only involves the superficial layers of the epidermis, and which very quickly spreads and passes from this stage into the superficial crusted lesions, in which the crusts have the characteristic "stuck-on" appearance with but little or no surrounding areola. On removing this crust a very superficial abrasion is found, freely exuding serous fluid, in appearance not unlike a slight burn. Even in a very acute widespread case of impetigo of the face it generally retains the same characters. In the impetigo under consideration the early macroscopical lesion is a pustule quite recognisable when the size of a large pin-head but still more so when a little larger. From the earliest stage this pustule is surrounded by a distinct inflammatory areola. On opening the pustule and cleaning away the pus a tiny shallow ulcer is exposed, differing clinically from the superficial abrasion in impetigo of the face, though possibly only one of degree. This small pustule is not associated with the hair-follicles like the staphylococcic folliculitis, although the hair-follicles may become ultimately involved. As the lesions enlarge they tend to become oval and begin to dry in the centre. When they reach the size of a split-pea without being ruptured the appearances are very characteristic. There is a central greenish-brown colour due to the drying process, surrounded by a yellow zone at the spreading border where the pus is still liquid, and beyond this there is a well-marked inflammatory areola which becomes very wide in the later stages and is so different from the impetigo of the face. The corneal layer of the healthy skin is continued without interruption over this inflammatory pustule except that it is beginning to dry in the centre. The ulcer, which is exposed on cleaning away the pus, has also very characteristic appearances. Its borders are sharply defined; its

edges precipitous; the whole ulcer cup-shaped and the base granular. The sores are painful.

As the condition progresses thick crusts form of a dark-brown colour and cover the whole of the lesion. It is at this stage that the lesions assume the appearance of the more common impetigo—with the “stuck-on” crusted condition—or they may become ruptured, the exuding pus and serum dries on, greatly adding to the thickness of the crust and sometimes producing a rupoid condition—hence the name *rupia* of Bateman.* When they reach the size of a sixpenny-

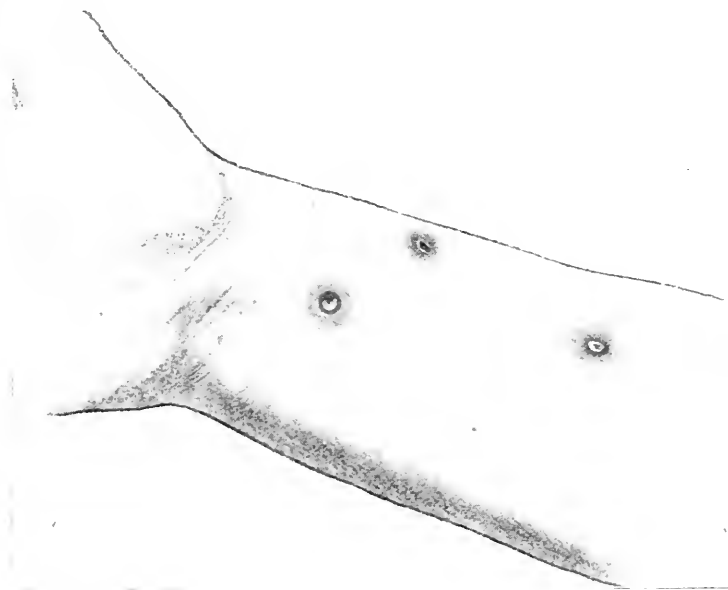


FIG. 1.—Shows the early streptococcal lesions on the forearm. Two of the lesions are intact, showing small oval pustules starting to dry in the centre with a wide inflammatory areola. The larger circular lesion is one from which the pus has been removed, exposing a sharply-defined shallow ulcer. At this stage pure cultures of streptococci may be grown.

piece to that of a shilling piece, the acuteness usually subsides and the inflammatory areola assumes a livid hue. The contents of the sore under the crust become more liquid and often blood-stained. Finally, there is left a very unhealthy crusted ulcer varying in depth from $\frac{1}{8}$ to $\frac{3}{8}$ in., and which bleeds readily. The edges of these ulcers become infiltrated and rolled; assume a punched-out appearance very

* The lesions at this point clearly come under the category of “ecthyma.”

suggestive of a syphilitic gummatous ulcer. These callous ulcers are found almost entirely on the lower limbs and chiefly below the knees.

When seen at this stage these cases are often sent into hospital diagnosed "syphilis." When the healing process is complete, well-marked, sharply-defined scars and pigmentation are left which also are often mistaken for old syphilitic lesions. To a certain extent the appearances left after the lesions are healed depends upon the chronicity and depth of the ulceration. It was the teaching at one time that the characters of the syphilitic scar were that they were



FIG. 2.—Showing large unhealthy ulcers, staining and scarring on the site of old healed lesions, and two tiny inflammatory pustules. One of these tiny pustules spread rapidly and developed into a large ulcer similar to those shown in the figure while the patient was under treatment in hospital.

sharply-defined, complete, slightly depressed if anything, and the scar tissue was usually soft and silky and surrounded by a zone of pigmentation. These are just the characters that some of the healed callous ulcers present. There is never, however, any of the serpiginous character as is found in the old tertiary syphilides.

It is not to be inferred that all the lesions go on to the formation of large callous ulcers. There are all stages and degrees of the infective process, but the primary pustule is the same, and a culture

from these early lesions gives a pure growth of streptococci; also the superficial type of impetigo may be present at one and the same time on the limbs.

Relapses are frequent. It is not uncommon for patients to be returned to hospital within one or two weeks with fresh sores; or a patient will be discharged to duty from one hospital after six to eight weeks' treatment only to be readmitted to another within a very few days. The wastage to the Army may amount to four months or more in some cases. Frequently these men stated that it was the wearing of puttees which precipitated each attack.



FIG. 3.—Two large, punched-out, sharply-defined ulcers with rolled thickened edges. This is the type of lesion which has been mistaken for gummatous ulcers of syphilitic origin.

Bacteriology.—From the frequency with which pure streptococcic growths were obtained from these pustules on different media there appears little doubt that the lesion is primarily due to the streptococcus. In the larger lesions very often the streptococcal growth was contaminated by *Staphylococci albus* and *aureus*. The latter sometimes quite overgrew and obliterated any possible trace of the streptococcus. The bacillus pyocyaneus was found in a few of the large sores. To what extent the secondary staphylococcic infection takes part in the destructive process it is a little difficult to say, but doubtless it plays an important part. Pure staphylococcic conditions—boils and folliculitis—frequently complicate the condition and add

greatly to the difficulty of treatment and the duration in hospital. Wassermann reactions were done in all cases with negative results, also the edges of the sore were scraped and serum examined under dark ground illumination with negative results. There was no question of the ulcers being of varicose origin.

Treatment.—There is little to add to already known methods. One can emphatically lay stress on the great importance of rest in bed in all acute cases or in those with any degree of ulceration. Treatment was often ineffectual until patients were put to bed and not allowed to do hospital fatigues. Even comparatively trivial cases would sometimes require rest in bed before healing took place. The

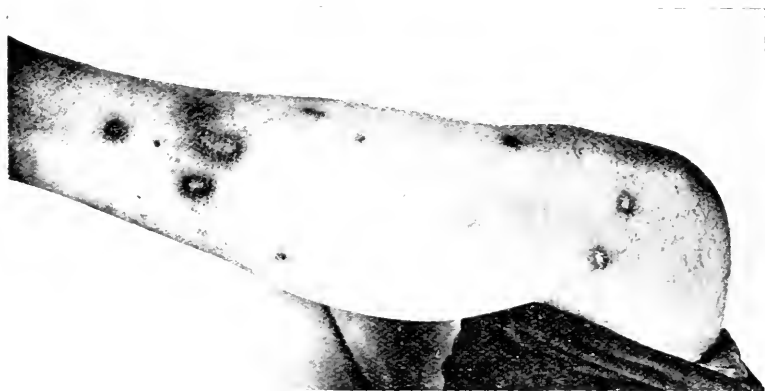


FIG. 4.—This plate was taken some months after the healing process was complete, and shows the central white scar with its surrounding deep pigmentation.

essentials in local treatment were the perfect cleaning of the sores, and dressing twice daily, if possible. Almost every application was tried, including scarlet red, brilliant green lotion and ointment. The most satisfactory applications were a 20 to 30 per cent. ichthyol ointment containing $\frac{1}{6}$ per cent. perchloride of mercury, bismuth iodoform paraffin paste, red lotion, ensol, and boric fomentations. Each had its own place and use. Scarlet red and brilliant green were only useful when the sores were fairly clean, and even then gave no better results than the other things properly applied. Strapping the callous ulcer with boric acid powder sometimes gave excellent results.

N.B.—Since this paper was written a few cases showing very

similar pustular lesions have been met with in which the bacteriological examination revealed a Gram-negative diplococcus in direct smear and giving a pure growth in blood-agar, and morphologically similar to the gonococcus but rather smaller. The organism was put through the sugars and found to give an acid reaction without any gas formation in glucose, lactose and saccharose.

UNILATERAL STRIÆ ATROPHICÆ (STRIÆ CUTIS DISTENSÆ) OF THE THORAX.*

By F. PARKES WEBER, M.A., M.D., F.R.C.P.

THE patient, A. G—, a young man, aged 18 years, a tailor, was admitted to hospital on June 29th, 1917, with severe pulmonary tuberculosis, more advanced in the right lung, in which lung there are extensive cavernous signs. He has moderate pyrexia, of the hectic type, and his sputum contains abundant tubercle bacilli. He himself says that his illness commenced with "influenza" in October, 1916, up to which time he had not been severely ill. Since the commencement of the illness, he says he has been accustomed to lie on the left side (or rather, half-turned to the left side), because whenever he tries to lie on the right side he starts coughing, and lying on his back also brings on coughing. Over the left lower postero-lateral portion of the thorax he has a cluster of "cleavage" stripes, so-called *striæ atrophicæ* or *lineæ atrophicæ* (also called *striæ cutis distensæ*), which he states developed about one and a half weeks before admission to hospital, that is to say, about the middle of June, 1917. They are still purplish in colour, and have not yet acquired the glistening white appearance of so-called *lineæ albicantes*, into which they may be expected to develop later on. Their shiny transparent surface allows numerous small blood-vessels to be seen in them on close inspection, but this gives them, when viewed from a little distance, their diffuse purple tinge. They are arranged transversely to the long axis of the body, as such striæ always are, when they occur on the thoracic or lumbar region of the back. In the present case they occupy, as already stated, the postero-lateral infrascapular

* Case shown at the Dermatological Section of the Royal Society of Medicine on July 19th, 1917.

area of the left ribs, that is to say, the area below the level of the lower angle of the scapula. Owing to the invariable position of the patient, lying as he does half-turned towards his left side in bed, with his shoulders propped up on pillows, the convexity of this left postero-lateral region of the thorax is abnormally increased, and consequently the skin over it is kept distended. This explains why the cleavage lines (*striae atrophicæ* or *striae cutis distensæ*) have



appeared in that situation, as I shall endeavour to make clear (see figure).

Striae atrophicæ or *striae cutis distensæ* are the result of rupture, or rather "cleavage," of the deeper layers of the cutis, and when this cleavage is not caused by distension of the skin from pregnancy, ascites, large tumours, arthritic swellings, subcutaneous œdema, or excessively rapid growth of subcutaneous fat, it is nevertheless almost always due to distension or stretching in some way or other,* though the mechanism may appear obscure. It is this relatively

* For this reason, I think, the term *linear atrophy of the skin*, sometimes applied to these cases, is a bad one. It suggests an aetiological analogy with the condition known as *macular atrophy of the skin* (*macula atrophica*)—a totally different condition.

obscure group (to which the present case belongs) that I shall now shortly consider. It may be subdivided under two headings:

(a) Cases of *striæ atrophicæ* about the shoulders, elbows, hips, buttocks, and thighs, due to rapid growth (local or general) at or about the period of adolescence, the growth of the skin apparently not being able to keep up with the growth of the long bones and of the muscles and subcutaneous tissue covering the long bones and joints. Nearly all the cases of so-called "idiopathic" *striæ atrophica* may be classed in this subdivision. Thus, several years ago, I saw a well-developed muscular young man, aged 17 years, who had recently developed typical *striæ atrophicæ* about the shoulders, over (and somewhat in the direction of the fibres of) the deltoid muscles. There had been no illness, accumulation of fat, nor œdema, to account for the skin cleavage, but the boy was growing rapidly. Similar cases are not very rare, I think. Dr. Arthur J. Hall, Major, R.A.M.C.(T.), has kindly told me of an interesting case of "striæ" in the lower half of each breast in a young unmarried woman. The breasts had apparently never been bigger, and there had certainly been no pregnancy. Dr. Hall suspected that the striæ in that case were due to stretching of the skin by pressing the breasts upwards (by means of stays) so as to secure a "good figure."

(b) Cases, like the present one, associated with a febrile or wasting disease, starvation or grave inanition of some kind.

Cases of Group (b) have been known to be connected with typhoid fever, appendicitis, colitis, dysentery, rheumatic fever,* severe pulmonary tuberculosis (as in my present case), pneumonia,[†] cerebro-spinal meningitis, scarlet fever, diphtheria (not quite certain), mumps,[‡] Hodgkin's disease, intrathoracic malignant disease, septic osteomyelitis, septic wounds, and various suppurative and other diseases and conditions of both medical and surgical interest. In these cases there is a kind of malnutrition of the skin, which forms part of the general malnutrition of the body, and it leads apparently to diminished distensibility (elasticity) and favours cleavage. Occasionally it may be connected with diarrhœa (as in some typhoid fever cases) and wasting diseases. But, apart from that, it is not quite clear why

* Sangster, *Brit. Journ. Dermat.*, Lond., 1907, xix, p. 96.

† Cf. F. Craven Moore, *Practitioner*, Lond., 1908, lxxxi, p. 397.

‡ Cf. E. G. Graham Little, *Proc. Roy. Soc. Med.* (Sect. Derm.), 1912, v, p. 77.

this special malnutrition of the skin should be present in some cases and not in others of equal or even greater severity. That a peculiar nutritional condition of the skin is sometimes present during typhoid fever is certain. Thus, it is well-known that chronic psoriasis sometimes more or less completely disappears during typhoid fever, generally to reappear sooner or later after recovery from the fever. Little wounds made during the height of the fever (as in opening small abscesses) have a tendency to gape in a most peculiar manner before they ultimately heal up by granulation. Some time ago, in a grave case of typhoid fever under my care, a boil on the front of the thigh was incised, and I observed that in the course of the next day the skin retracted so much that the same incision came to appear like a big fissure in the skin, the wound afterwards healing by granulation. As mentioned above, excessive diarrhœa in typhoid fever may doubtless increase the ordinary febrile dryness of the tissues and possibly diminish distensibility (elasticity) of the skin. Anyhow, because typhoid fever and other febrile and wasting diseases do not usually give rise to *striæ atrophicæ* of the skin, it is certainly not right to argue that therefore these striæ, when they do occur in association with such diseases, must be causally unconnected with them. By a similar line of argument one might come at once to the conclusion that tabes dorsalis and general paralysis had no connection with syphilis.*

Another ætiological factor that must be taken into account is that in young persons during typhoid fever and similar illnesses the growth in length of the skeleton is sometimes greatly accelerated. This increased rate of growth has been attributed to the fact that, owing to the illness, the patient is lying in bed and thus the normal retarding influence of the weight of the body on the growth in length of the vertebral column and (especially) the long bones of the lower extremities, is removed. Moreover, in such young persons confined to bed owing to illness, the muscles and subcutaneous tissue about the shoulders, hips and thighs seem sometimes to increase in size so as unduly to distend the skin over them, and thus give rise to "cleavage striæ," notably over the deltoid muscles, gluteal muscles, and the great muscles of the thighs. Such striæ probably appear

* Cf. F. Parkes Weber, "Remarks on Localised Flushing . . . also on Striæ Patellares," *Med. Press, Lond.*, 1905, cxxx, p. 261.

more frequently about the shoulders in males and about the buttocks in females, as has been emphasised by Craven Moore in regard to striæ associated with pulmonary diseases.* L. Bleibtren† and L. Silberstein‡ have especially drawn attention to the occurrence of striæ over the nates in girls after scarlet fever, and it seems to me that in such cases the favourite position of the patient in bed may have been one in which the hip-joints were flexed, thus causing prolonged distension of the skin over the nates.

The sites of the *striæ atrophicæ* that develop during febrile diseases have been supposed sometimes to be connected with pressure of the bedclothes, but they are obviously nearly always determined by the position of the patient's body in bed. The striæ are, in fact, produced where the skin is kept distended. Thus, when the patient during the illness lies habitually with his knees flexed, the tendency is for the *striæ atrophicæ* to form over the convexity of the joint (that is to say, where the skin is kept abnormally distended), constituting the local condition known as *striæ patellares*.§ When one knee is flexed to a greater degree (or more frequently) than the other, the *striæ patellares* are likely to be unilateral and limited to that knee, or to be more numerous and more marked over that knee than over the other. Owing to the patient's shoulders being propped up with pillows the striæ not rarely occur where the skin is stretched over the convex part of the back below the shoulder-blade level (*i. e.* below the part of the trunk which is pressed forwards by the pillows). If the striæ are limited, as in my present case, to one side of the trunk, or are more numerous on one side than on the other, it will be found that the patient during the illness has been lying more or less on one side, propped up in bed. In such cases it is on the more convex side of the trunk (over which the skin is necessarily more distended) that all the striæ, or most of them, form. Thus, in my present case, owing to the active tuberculosis of the right lung, the patient has been

* F. Craven Moore, *loc. cit.*

† L. Bleibtren, *Münch. med. Wochenschr.*, 1905, lii, p. 1767.

‡ L. Silberstein, *Münch. med. Wochenschr.*, 1905, lii, p. 2185.

§ On *Striæ patellares* and the whole subject of *Striæ atrophicæ* and *Striæ cutis distensæ*, cf. G. Fischer, *Münch. med. Wochenschr.*, 1904, li, p. 482; H. Köbner, *ibid.*, 1904, li, p. 928; K. Zieler, *ibid.*, 1905, lii, p. 1764 (with many references to older literature on the subject); L. Bleibtren, *ibid.*, 1905, lii, p. 1767; J. L. Bunch, *Brit. Journ. Derm.*, 1905, xvii, p. 1; F. P. Weber, *loc. cit.*

lying with the right lung uppermost*—his shoulders having been, as usual, propped up with pillows. The striæ have developed over the abnormally convex part of the trunk, which in that position of the body is the lower left postero-lateral portion of the thorax (the outer part of the infrascapular region). Whilst the photograph of the striæ was being taken the curved position of the trunk in which the patient had been lying, was as far as possible maintained.

Cases more or less like this one, in which *striæ atrophicæ* are more numerous on one side of the trunk than on the other, are not very rare. During the last few years I have had two cases of fatal Hodgkin's disease or "Lymphogranulomatosis maligna" (with pulmonary complications, in young adults), in which *striæ atrophicæ* occurred on the trunk and were unilateral or more marked on one side than the other. H. D. Rolleston † published an illustration of a case in which there were *striæ atrophicæ* more numerous on one side of the trunk than on the other, associated with malignant disease of the pleuræ and peritoneum. In another curious case demonstrated by Rolleston there were unilateral striæ of the back.‡ In a case shown by E. Laming Evans § the striæ were nearly unilateral, affecting the thoracic and lumbar regions of the right side of the back. The patient, a soldier, aged 19 years, had had a severe wound, with febrile complications and constitutional symptoms. This probably favoured the development of the *striæ atrophicæ*, in the same way that typhoid fever does, but the young man's position in bed doubtless determined the localisation of the striæ by rendering the skin more tense on one side (*i. e.* the more convex side) of the back than on the other.

Note.—Dr. Arthur J. Hall, Major, R.A.M.C.(T.), has kindly sent me the following notes of a remarkably similar unilateral case of striæ under his care in the Third Northern General Hospital. "The patient, a young man, aged about 20 years, was admitted on account of a pleural effusion of the left side. There were no *striæ atrophicæ* on admission. The left chest was distended with fluid, pushing over

* Patients with pulmonary tuberculosis mostly lie with the side on which the tuberculosis is more active uppermost.

† H. D. Rolleston. "Remarkable Striæ Atrophicæ due to Cachexia," *Brit. Med. Journ.*, 1908, i, p. 494.

‡ H. D. Rolleston, *Proc. Roy. Soc. Med. (Clin. Sect.)*, 1909, ii, p. 59.

§ E. L. Evans, *Proc. Roy. Soc. Med. (Sect. Derm.)*, 1915, viii, p. 230.

the heart and causing considerable respiratory distress. Paracentesis was performed and a large quantity of fluid withdrawn. It filled up again very quickly and the operation had to be repeated two or three times. He was altogether laid up in bed for several weeks and it was noticeable from the first that he always lay half turned on the right side, never flat on his back or on his left side. This fact was rather curious seeing that the right lung was alone expanding. Exactly at what interval after his admission I am uncertain, but probably three or four weeks, I noticed on examining the back of the chest a series of *striae atrophicæ*, limited entirely to the right (sound) side, and extending more or less transversely from the level of the eighth or ninth dorsal spine to the top of the iliac crest. I can only give the levels approximately from memory. I think that they were caused by the constant stretching of the skin owing to his decubitus, described above. He was always propped up with several pillows, and resting on his right scapular region above and his right sacral region and buttock below, so that the intervening skin was always stretched into a curve with the convexity downwards and backwards. There was not a trace of any striae on the left side, although the chest had been much distended with fluid. I think it is probable that some of the cases in which these arise on the back and other parts after various illnesses, such as typhoid fever, etc., may similarly be due to continued strain on the skin from particular postures in bed."

A PLEA FOR THE RECOGNITION OF A COMMON ORIGIN FOR SHINGLES AND CHICKENPOX.

By W. P. LE FEUVRE, M.R.C.S.

Bulawayo, Rhodesia.

BETWEEN January in 1913 and January in this year I took notes of seven cases of chickenpox in children, following shingles in one of the parents. Three of these cases occurred in my own practice and the others I came across accidentally, although they were connected to a certain extent with my own cases.

CASE 1 (January, 1913). was the case of a farmer's wife living ten miles from a railway station. The shingles eruption extended from the left shoulder to the wrist, was preceded by the customary neuralgic pain for about a week, and within fourteen days was followed by chickenpox in a daughter, aged 10 years.

CASE 2 (March, 1913), was that of a missionary's wife living sixty miles from a railway station, who developed left intercostal shingles, and after fifteen days' interval her infant, aged $5\frac{1}{2}$ months, showed a typical chickenpox eruption.

CASE 3 (May, 1914).—The wife of a plumber had an attack of shingles on the left side (intercostal, axillary, and dorsal). I photographed the eruption and seventeen days later I photographed her daughter, aged 4 years, with an ordinary chickenpox rash.

CASE 4 (August, 1915).—A father came home from work in the middle of the week instead of at the week-end as he was in the habit of doing, on account of the pains of an attack of shingles (right iliac region). Fourteen days later, his son, aged 12 years, had an attack of chickenpox.

CASE 5 (April, 1916).—A lady had a small but extremely painful patch of cervical herpes on the left side of the throat, and her son, aged 8 years, developed chickenpox twenty days after I had first seen the shingles in the mother.

CASE 6 (May, 1916).—A clerk, living in Bulawayo, suffered from shingles extending from the right shoulder to the wrist; he got one of his sons, aged 14 years, to rub the arm with a zinc and starch powder, the result being that the boy developed chickenpox about twelve days later.

CASE 7 (July, 1916).—A railway clerk (Gwelo) had an attack of left inguinal shingles. Thirteen days later a chickenpox eruption began to show on his son, aged 4 years.

Details of Cases 1 and 2 have been published in the *Guy's Hospital Gazette* and have elicited notes from practitioners in various parts of England of thirteen similar cases.

Seventeen cases were notified in the correspondence column of the *British Medical Journal* between May and October, 1913, and every now and then a fresh case crops up in that journal.

A medical friend in Guernsey kindly sent me particulars of two cases which he had had in his practice in that island.

I also found that Dr. Johann V. Bokay, attached to a children's hospital in Budapest, read a paper at the International Congress of Medicine, held at Budapest in 1909, describing nine cases similar to those quoted above. These cases, in addition to two of his own, were published by Dr. Paul Heim in the *Berliner Klinische Wochenschrift* for December 9th, 1912, a translation of which in the *British Medical Journal* epitome for January 11th, 1913, gave me the first hint of a possible connection between the two diseases.

In a paper I sent to the *Medical Journal of South Africa* (March, 1914), I quoted the published cases in detail, taking the Hungarian and German ones from their original source, as there were one or two inaccuracies in regard to dates in the *British Medical Journal* translation.

The points common to all these cases which I thought at that time most noticeable were:

- (1) Chickenpox in one individual following shingles in another within the ordinary incubation period for the former disease, *i. e.* within twenty-one days.
- (2) No source of infection other than shingles being discoverable.
- (3) By far the majority of cases showed shingles in an adult, generally a parent, followed by chickenpox in a child.

This seemed to suggest that shingles might be a manifestation of chickenpox in an individual who had already had the latter disease in childhood, which appeared to be borne out by the following case reported by Dr. Busfield, of Enfield. (1) He writes: "In further support of the alleged connection between shingles and chickenpox (of which I must admit to having been somewhat sceptical), I should like to report the following: I attend a family with five grown-up daughters. The first, second, and third had chickenpox when the third was an infant. On September 15th the second began with a typical attack of shingles; on October 2nd, seventeen days later, the fourth developed chickenpox and no other source of infection could be traced. The fifth was away from home until September 24th, and up to the present has remained well."

Here it will be noted that (1) the shingles patient had already had chickenpox when a child, (2) that the younger sister who contracted chickenpox was the only unprotected one of the five (with the exception of the one who was absent), and the fact that she did so contract it at this later period would have seemed only natural if she had been exposed to a chickenpox infection, but following as it did her sister's shingles, it at once suggests a common origin for the two diseases.

On sorting out the cases (about fifty in number) more carefully, however, one finds three distinct types:

- (1) Chickenpox in one individual contracted from shingles in another.
- (2) Shingles contracted from a case of chickenpox.
- (3) Shingles and chickenpox existing in the same individual at one and the same time.

Of the first type forty-one cases have been reported; of the second, five cases; and of the third, four cases.

It is this third type which seems to me the most instructive, as it points to the eruption of shingles and chickenpox as being but phases of one and the same disease.

As instances of type (1) the seven cases I have quoted are quite typical. In Case 3 I photographed mother and daughter for two reasons: First, to show the typical nature of the eruptions in each case; and secondly, to decide whether there was any marked increase of spots over the region in the child corresponding to the seat of the herpetic eruption in the mother. This can, I think, be decided in the negative.

Before giving examples of the second type of case, I should like to lay stress on the care which has been taken to eliminate other sources of infection than the shingles. In a sparsely-populated country such as Rhodesia and with practices extending over large areas, it is comparatively easy to trace diseases to their source, and I am quite convinced in my own mind that in my seven cases I can practically exclude any other source of infection. With regard to other published cases, I may perhaps be allowed to quote a few which bear on this point.

Dr. Wainwright writes (2): "My sister-in-law informs me that many years ago, just before her confinement, one of her servants developed shingles, and they were much together as the servant suffered great pain. Ten days after her confinement my sister-in-law developed chickenpox, *having been absolutely away from anyone suffering from that affection*, and she gave chickenpox to her baby."

Dr. Roberts writes (3): "Recently there occurred in my practice a case of shingles of the scalp in an old patient who had previously met with an accident to his head. About a fortnight afterwards a child in the same house developed chickenpox. *There was no other case of chickenpox at the time in the neighbourhood from which the child could have contracted the disease.*"

Dr. Coates writes (4): "I was called to see a gentleman farmer; he had exaggerated herpes on the abdomen of a close type, very painful, severe, and extensive. On August 24th his married daughter who was staying with him developed severe varicella of a large type, also extensive: she was aged 28 years. The eruption was so bad as to suggest smallpox. Her rash, however, rapidly died away, and no further developments took place. The father is only now (September 13th) convalescent. *I was much puzzled with the varicella as there is none within twenty miles.* This is the second time that I have seen herpes followed by varicella in the same household."

Dr. Hepworth writes (5): "On September 12th I was called to a boy with varicella; the rash was three days old. On August 24th his mother had an attack of herpes zoster: *none of my colleagues have any case of varicella, and I can learn of none in the district.* In both cases the rash was typical and unmistakable."

Dr. Howard Distin writes (6): "E. H. B—, the father, had a severe attack of shingles, first appearing on July 14th and lasting for weeks. On August 1st, twenty-two days later, the only child, aged 5 years, developed chickenpox. *She did not attend school, had not travelled in any public conveyance for some considerable time, and there were no known cases of varicella in the neighbourhood.*"

Amongst Dr. v. Bokay's cases (7) is that of a boy, aged 10 years (T. J—), who was admitted into an institution for the blind on September 3rd. Two days later a dorso-pectoral shingles appeared upon him, which dried up in a few days without any considerable rise of temperature. In the same ward lay a boy, aged 13 years (K. J—), *who had not been in contact with the outside world for several weeks.* On September 21st, *i. e.* fifteen days after the appearance of T. J—'s shingles, chickenpox broke out on K. J—, and ran a typical, though mild, course. From this case the infection spread to two boys, aged 9 and 7 years, who were sleeping in the same ward, the rash appearing on October 6th and 8th respectively, and also to a boy, aged 7 years, in an adjoining room, his rash becoming visible on October 12th.

Dr. v. Bokay remarks in his paper on the absence up to that time (1909) of any evidence of chickenpox being followed by shingles, but adds "it is quite probable that when once attention has been drawn to the aetiological connection between the two diseases, one will have opportunities of observing this reverse sequence."

His prophecy has been fulfilled, and it is this class of case which I have referred to as "Type 2."

As these cases are in the minority, I think it will be worth while to quote all five.

Dr. Aikman writes: "Mrs. M— and her daughters keep a school. A child returned to school on September 22nd with some chickenpox crusts upon it. On September 29th, Miss H. M—, aged 30 years, developed shingles over the right side of the chest and breast. She had never had chickenpox. On October 10th her sister L—, aged 25 years, who had never had chickenpox, developed it. Two children attending the school developed chickenpox on the same day as Miss L—."

"A member of the G.H.N.L." writes to the *Guy's Gazette* (8): "My nephew, a boy, aged 13 years, was exposed to infection from chickenpox at school, and during the recent Easter holidays spent at his home, was considered more or less in quarantine. Two and a half weeks' after he was last exposed to infection he developed shingles. Although a healthy boy, he has usually taken any infection to which he was exposed, and has not previously had chickenpox."

Dr. Dando writes (1913) (9): "A week ago I was called to see a patient who was suffering from shingles; four weeks earlier I had been attending a son of this patient who was suffering from chickenpox."

"In 1904, in the same house, I attended the wife of this man, who was then suffering from shingles; five weeks preceding this I attended the daughter of this lady, who was then suffering from an attack of chickenpox."

Dr. Heatherley writes (10): "On April 8th I was asked to see a boy, aged 7 years, who had come out in spots the previous day. I found him covered with a typical varicella rash. On April 21st I was called to the only other child, a boy, aged 2 years, to find him with numerous patches of herpes on right buttock and all surfaces of thigh down to the knee. The largest patch was 4 in. by 2½ in."

At first sight the intervals of seven days, two and a half weeks, four weeks, five weeks, and thirteen days seem to follow no rule, but when it is noticed that the two longest intervals refer to the doctor's visits and not necessarily to the incubation period, it will be clear that the real incubation period may easily be brought into line with the other cases. In Dr. Dando's first case, the "four weeks earlier" probably represents an early stage of the disease, and it may not have been till the scabs appeared (as in Dr. Aikman's case) that infection took place, culminating in the attack of shingles in the father. Similarly in Dr. Dando's second case.

Coming now to the third type of case, the most interesting of all, we have four reported cases.

Dr. Coleman writes (11): "On Tuesday, April 8th, one of my patients travelled from Leeds to Huddersfield by train, and was obliged to sit facing the engine, and the carriage window being open, he was exposed to a very cold draught; on the Thursday and Friday he complained of severe pain in his back and below the right scapula, which he compared to bad lumbago. On Saturday morning (April 28th) there was an eruption of vesicles characteristic of *Herpes zoster*. In the course of a day or two several of these vesicles ran together and formed bullæ, varying very much in size, but all were filled with sanguineous fluid. On Monday (April 14th) this patient, who is over seventy years of age, began with a typical attack of varicella. The chickenpox vesicles went through their regular stages, and there were scores of them, on the scalp and back especially. Two have left small pits or scars. With regard to the shingles the bullæ gradually dried up, but, unfortunately, the skin beneath became gangrenous, or, at any rate, formed sloughs, which are at present slowly separating and leaving healthy granulating ulcers."

Dr. John Orr writes (12): "A male, aged 45 years, became affected with *Herpes intercostalis* on September 29th, and had a well-marked manifestation. On October 2nd he developed an equally well-defined varicella eruption typical in character and distribution."

Dr. Watson writes (13): "Mr. J. B. R—, aged 38 years, came to me on January 15th. I found an eruption of herpes above the right buttock. . . . I was sent for on January 28th to see Miss J. R—, aged 4 years, daughter of above, who complained of pain and irritation around the vulva following an attack of bronchitis. I found a well-marked vesicular eruption along each labium.

Three days later the child developed an atypical rash, which I subsequently called modified chickenpox, but there was only one real vesicle, a large one on the back, which scabbed over in the usual manner. The child was very ill with high temperature and delirium."

Dr. Hugh Barber writes (14): "A few weeks ago I saw a man, aged 45 years, with Herpes zoster and a rash indistinguishable from chickenpox both out at the same time. The illness began with severe pain around the side; an extensive rash of Herpes zoster came out next day, with the usual distribution along the course of an intercostal nerve. On the fourth day a crop of typical chickenpox spots had come out, some papules, but many already in the vesicular stage. They were distributed over the trunk and limbs, and also in the mouth and over the face and scalp. Both diseases ran a normal course. I could not trace where the chickenpox infection had come from. This patient had no children, and his wife, who had suffered from chickenpox as a child, remained quite well. He himself had not had chickenpox before."

So far I admit that this third type has only been found in 8 per cent. of the published cases, but when attention has once been drawn to this class of case I have no doubt many others will come to light.

It will be seen that the interval between the herpetic and varicellar eruption is fairly constant, *i.e.* from two to four days. This can scarcely be considered a coincidence, and it seems to me to be a reasonable inference that the two eruptions are but distinct phases of one and the same disease. As to why the disease appears in some individuals in that form which we have been accustomed to call "shingles" and in others in the form of a "chickenpox," I am unable to offer any explanation other than that of immunity, natural or acquired.

Whatever may be our theories on this point however, I think that, in view of the number of reported cases, the time has arrived when shingles should be definitely recognised not only as an infectious disease, but also as one liable, under certain unknown conditions, to become a starting-point for a chickenpox epidemic, and, therefore, deserving of a place in the list of notifiable diseases.

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- (3) *Brit. Med. Journ.*, August 30th, 1913.
- (4) *Ibid.*, September 13th, 1913.
- (5) *Ibid.*, October 10th, 1914.
- (6) *Ibid.*, April 10th, 1915.
- (7) *Proceedings of Sixteenth International Congress of Medicine*. Section 10: *Pediatric*. Budapest, 1910.
- (8) *Guy's Hosp. Gazette*, May 24th, 1913.

- (9) *Brit. Med. Journ.*, November 15th, 1913.
- (10) *Guy's Hosp. Gazette*, April 25th, 1914.
- (11) *Ibid.*, May 10th, 1913.
- (12) *Brit. Med. Journ.*, October 18th, 1913.
- (13) *Guy's Hosp. Gazette*, April 24th, 1913.
- (14) *Ibid.*, September 23rd, 1916.

ADDITIONAL NOTES.

Since writing the above I have had the opportunity, through the kindness of Dr. F. Parkes Weber, of perusing his paper on "Herpes Zoster" (published in the *International Clinics*, vol. iii, Series 26), and there find two most interesting cases recorded tending still further to clinch the argument for the oneness of shingles and chickenpox.

"A Jewish patient (male, aged 59 years), was treated for glandular enlargements with arsacetin for a period of two weeks, when an eruption of typical Herpes zoster of the right shoulder broke out. About five days later a generalised but scanty eruption of varicella-like spots occurred. A little boy, aged 4 years, was in the same ward, and ten days after his discharge from the hospital developed varicella."

Here we have an example both of Type 3 and Type 1, and the case as far as I know is the first to be recorded of infection proceeding from a Herpes zoster obviously due to arsenical treatment. The interval between the appearance of the herpetic and varicellar eruptions in the first patient (about five days) also tallies with previously recorded cases.

The second case of Dr. Weber's is again of the third type, and is as follows:

"A widow, aged about 60 years, after the usual preliminary neuralgia, developed a typical Herpes zoster on the forehead, left eyelids, and left half of the nose. At the end of the first week a generalised vesicular eruption of small varicella-like spots was noticed scattered over the trunk and extremities."

Here, again, we have the sequence noted in the other cases of this type: the herpetic eruption followed within the week by the varicellar eruption.

Dr. Weber also refers shortly to a third case of this type:

"A boy, aged 8 years, who, as a result of arsenical treatment for Hodgkin's disease, first of all displayed right intercostal Herpes zoster, and later on showed the generalised vesicular eruption on the trunk."

From the point of view that it evidently requires no outside infection

to start a chickenpox epidemic (proved by the above cases following arsenical treatment), it is an interesting fact that we see more cases of chickenpox amongst the natives of Rhodesia than of any other infectious disease, and during an epidemic at Livingstone (Northern Rhodesia) three years ago there happened to be under treatment at the same time in the native hospital two cases of shingles and one of chickenpox. It would be instructive to ascertain whether these eruptions have been known to exist amongst the natives of isolated islands, etc., before the invasion of Europeans, bringing infectious diseases in their train, as this would go further to confirm the origin, one may almost say *de novo*, of this disease.

Certain correspondents in the medical journals have from time to time expressed an opinion that coincidence is sufficient to account for the class of cases quoted above. If the number of cases so similar in their behaviour in every respect does not of itself disprove the idea of coincidence, may I suggest that the number of cases in which the sequence has been prophesied may surely be allowed to possess some weight?

In four out of my own seven cases this was so.

In Case 3, the photograph of the mother's shingles was taken in the full belief, expressed at the time, that after the ordinary incubation period I would be able to photograph the child's chickenpox, a confidence which was subsequently fully justified.

In Case 1, after treating the mother's shingles, I wrote and told the parents to expect chickenpox in the children. A week later I received a letter from the father to this effect: "Last night my wife would have been able to sleep more comfortably had the children not been so restless. All three of them have succeeded in contracting chicken-pox." A little later I ascertained that a native servant who came much in contact with two of the little boys, had also been infected.

In Case 4, the wife of the patient when writing to me on the subject of her husband's shingles, says: "I was writing to Mrs. L—at the time he came home, and mentioned the matter to her. She at once replied that, 'according to her doctor's theory, I could expect my children to have chickenpox in about a fortnight.' I laughed, and forgot it, until the boy actually had it: then I wrote and told my sister to tell her doctor of the fact.'"

In Case 6, on meeting this patient (a personal friend), in the street one day with his arm in a sling, he informed me that he had had an attack of shingles, whereupon I remarked, "You will probably find that your boys will get chickenpox!" His immediate reply was, "Well, they've had it." On my asking what interval had elapsed between his shingles and the boys' chickenpox, he mentioned a period of twelve days, which was, of course, what I had approximately expected. A few days later, on meeting him again, he remarked, "My wife is very angry with Dr. X— for not telling her that my shingles was infectious, as she had to give up her music pupils owing to the boys getting chickenpox" (*verb. sap.!*)

So with some other of the recorded cases :

Dr. Cressy writes : " A patient called on me and showed me a large patch of shingles on her side. I told her of the cases reported, and *asked her to see if her children developed chickenpox in fourteen days.* To-day (fourteen days exactly) she asked me to see her little daughter, and I found the child suffering from a smart attack of chickenpox."

Dr. Cardin writes : " Ten days ago the mother of two children came to consult me about an attack of shingles on the left thigh. As she left my house *I asked her to look out for the occurrence of chickenpox in the children.* To-day I was called in to see both the children, who have very well-marked chickenpox."

A thing that one may so often confidently expect can surely scarcely be called a coincidence.

CLINICAL NOTES.

CONGENITAL ICHTHYOSIFORM ERYTHRODERMIA.

By W. HERBERT BROWN, M.D., CAPT., R.A.M.C. (T.C.)

As this affection is so exceedingly rare and as illustrations of its clinical appearances are equally so—the following case, with photographs, will be of interest and add to the mental picture of this extraordinary skin condition.

It was in 1902 that Brocq first clearly differentiated this interesting condition, recognising its clinical entity from other closely-allied dermatoses, especially the much more common—true Ichthyosis. The two main features of difference being the presence of erythrodermia, the implication of the flexures, and either the palms, or soles of the feet in congenital Ichthyosiform erythrodermia. Most of the cases have been observed in France. Only two cases have been recorded in America—the last just published in the *Journal of Cutaneous Diseases*, April, 1917, by Mackee and Rosen.

The condition if not present at birth appears soon afterwards. Both sexes seem equally liable to be affected, and in some cases there is a hereditary history. In Mackee and Rosen's case there were no other members of the family affected; in this case the patient states his father had the palms of his hands affected similarly to his own all his life. His mother, three sisters, and two brothers were not affected.

CASE REPORT.

I. W. B—, aged 31 years. A well-developed and well-nourished man. Though the skin condition had been present from early infancy, he had always enjoyed good health and had had no illness apart from measles and mumps. He took part in all the sports while at school and had always been fit for a hard day's work since. Apart from the dermatosis there was nothing of note to record; mentally and physically he was well. The Wassermann reaction was negative.

To simplify description, regions will be taken separately:

Head.—Hair was very dark, of quite normal growth and appearance. The scalp was dry and scaly like a mild Seborrhœa capitis,

but not erythematous. Brocq states that in all his cases there was seborrhœa of the scalp, sometimes marked with much crusting. The patient's eyes were very blue and his face had a bronzed sun-burned look, due to a well-marked erythrodermia. This was uniform and diffuse, affecting chiefly the cheeks, ears, spreading on to the neck, fading imperceptibly on the forehead and towards the middle third of face. The skin of the face was quite smooth, but gradually became thicker and firmer on the neck. The lips and mucous membranes were quite normal. As on the face, the erythrodermia on the neck was most marked on the sides, fading towards the front.

The trunk.—The appearances on the front of the chest and abdomen were very striking—see Fig. 1. The skin from the clavicles to the level of the iliac crests was almost entirely covered with very dark adherent corny hypertrophic epidermic crusts forming small flat quadrangular crusts, brownish-black in colour, arranged between the natural lines of the skin; an appearance not unlike that seen in an old profusely-cracked piece of leather. The skin naturally felt very rough. On the chest and around folds of the axillæ the fine fissures between these small blocks ran vertically and obliquely according to the natural folds of the skin, while on the abdomen they ran transversely, giving a parallel arrangement to the crusts. Over the sternum and lower half of the abdomen the skin was thickened, but free from crusts. These corny epidermic blocks could be removed by a curette but with difficulty, leaving a dusky smooth base. On the back the condition was much less striking. There was generalised thickening and a slight corny condition over the scapular areas. The posterior folds of the axillæ were similarly affected to the anterior, also the armpits, but to a considerably less extent. In the axillæ and over the pubic region the growth of hair was distinctly less than normal. Skin of penis, scrotum, and buttocks was much thickened, showing well the exaggerated natural lines. The groins were practically unaffected.

Upper extremities.—As shown in the plate there was a very well-marked symmetrical, narrow band of erythrodermia and keratosis extending from axillæ down inner side of arms to the flexures of the elbows, where it broadened out and faded towards the forearm. This band was sharply demarcated from the more normal but thickened skin over the rest of the arms, presenting an appearance



FIG. 1.

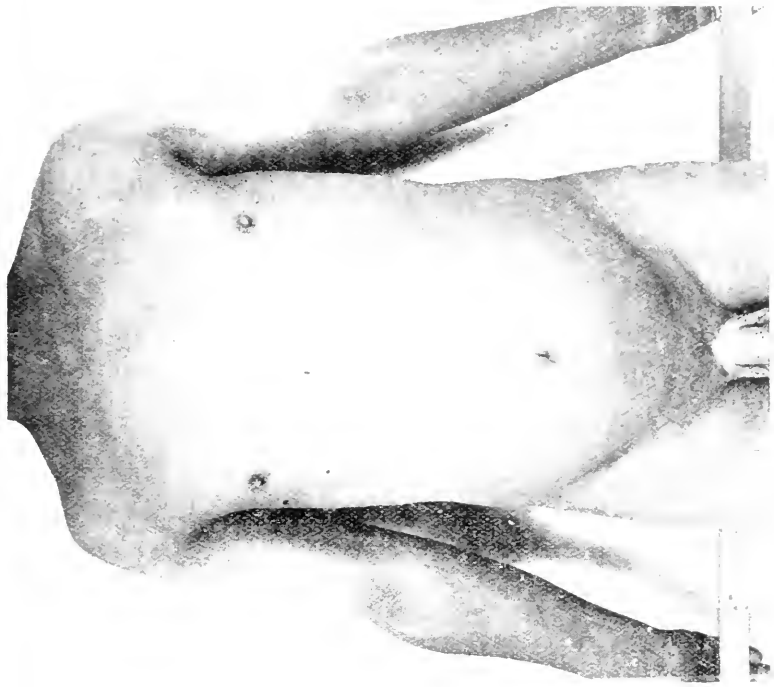


FIG. 2.

TO ILLUSTRATE CAPT. W. H. BROWN'S CASE OF CONGENITAL ICHTHYOSIFORM ERYTHRODERMIA.



FIG. 3.

TO ILLUSTRATE CAPT. W. H. BROWN'S CASE OF CONGENITAL
ICHTHYOSIFORM ERYTHRODERMIA.

suggestive of Ichthyosis hystrix. At the wrists the skin became greatly thickened—almost hide-like, with the natural lines and folds very marked, and in colour a dusky red. On the dorsal surfaces of hands and fingers the same thick appearances prevailed. The palmar surfaces presented another very striking picture (see Fig. 3). Over fingers and palms alike the hyperkeratosis was extreme, assuming a warty appearance with well-marked fissuring along the natural lines and folds. The nails were normal in appearance and growth.

Lower extremities.—The thighs, legs, and popliteal spaces showed the generalised thickening of the skin and slight prominence of the papillae, but no corny formation at any part, and no apparent erythrodermia. The soles of the feet were practically normal in appearance. The lanugo hairs on the body were barely perceptible.

In the case described by Mackee and Rosen the erythrodermia and hyperkeratosis assumed an irregular gyrate configuration differing from this case in which these conditions were uniform and absolutely symmetrical. In both cases the feet were unaffected.

(Fig. 2 shows the condition after some weeks' treatment with a simple emollient.)

P.S.—A very complete review of the literature of this condition will be found in the *Journal of Cutaneous Diseases*, May-June, 1917.

A CASE OF SYPHILITIC ERUPTION DETERMINED BY THE ADMINISTRATION OF BROMIDE OF POTASSIUM.

By ARTHUR WHITFIELD, M.D., F.R.C.P.

THE following case seems to me to be worthy of record:

On May 1st, 1917, a woman, aged 38 years, attended the Out-Patient Department of King's College Hospital for a rash on the face.

On examination it was found that she had a mass of irregularly grouped papules varying in size from that of a hemp-seed to that of a small pea on the front of the chin, chiefly on the right side, and another similar group on the forehead between and over the eyebrows. The papules were of a bright, coral-red colour, oval in shape, and rose very abruptly from apparently normal skin. They were firmly elastic to the touch, and on examination with a lens they showed that the red, domed surface was thickly beset with minute, almost pin's-

point-sized, pustules. I pointed this feature out to the members of the class, and remarked that this was diagnostic of a halogen eruption—most probably bromide. I then inquired whether the patient had been taking any medicine, and on her answering in the affirmative I wrote her a note for her to give to her doctor asking him if he had been giving her a medicine containing bromide. On May 8th she returned with a note from her doctor saying that my surmise was correct, and that she had been suffering from insomnia and nervousness after influenza, for which he had prescribed 30 gr. of bromide of potassium a day, and that she had been taking this medicine for about a fortnight.

I then prescribed *lotio calaminæ*, and prophesied that the eruption would fade away in about three weeks' time.

On May 22nd she came back again feeling quite well, and said that the rash had nearly died away. On examination at this date the eruption was found to have flattened down considerably, the pustulation was indistinct, and the surfaces of the papules were covered with fine scales. I therefore concluded that the rash was in full retrogression and would soon be gone.

On June 5th she attended again because, as she said, the eruption was coming back. I was intensely surprised at this, and made another careful examination. The papules were then distinctly more infiltrated than when last seen, though hardly as much so as when first seen. They still looked like bromide papules, but owing to the crusting and scaling the finer details could not be made out clearly. I asked if she had taken any more of the medicine and she replied in the negative, but said that during the last week she had suffered severely from headache. Indeed, she looked ill, and had a somewhat ashen colour.

I then pointed out that there was evidently something unusual about the case, and that one must be always ready to revise one's diagnosis in the light of more recent developments; that the rash, though still resembling a bromide eruption when one knew that such had been present, was no longer typical; and that the recurrent infiltration might be due to some other cause. This, combined with the malaise and the headache, suggested that she might be developing syphilis, and I should therefore send her up to the Pathological Department for a Wassermann reaction. This proved to be strongly

positive, and on June 13th she was given a dose of novarsenobillon, after which the eruption rapidly and completely disappeared, her health immediately improved, and she is now under the usual prolonged treatment for syphilis.

In commenting on the case, the first point that occurs to me is the correctness or otherwise of the original diagnosis. I may say at once that I have still no doubt about the correctness of the diagnosis of bromide eruption. It was for me an absolutely characteristic eruption, and that the patient should happen to have been taking 30 gr. of bromide unknown to me while I made the diagnosis seems to me to be stretching the long arm of coincidence too far.

The diagnosis of syphilis later is, I think, completely established by the Wassermann reaction and the result of treatment, so that I think we may assume definitely that this patient had first an eruption of papules due to bromide of potassium, and that later these identical papules, after partially resolving, infiltrated again as the result of syphilitic infection.

We are all very familiar with the effect of local trauma, such as scratches and cuts, in determining the incidence of the eruption of syphilis, but this case is for me the first where I have observed the localisation determined by the ingestion of a drug. At the same time I do not know that it should cause any great astonishment that such should be the case when we remember the intense disturbance of nutrition of the skin occurring in these halogen eruptions. It would appear to prove that bromine, unlike iodine, has no untoward influence on the virus of syphilis. It is a matter of some regret to me that I am unable to state exactly what stage of syphilis this was. The history did not offer any very conclusive evidence on this point, and once the positive reaction had been established I did not feel justified in awaiting further developments. My own opinion is that this eruption was the beginning of early secondary syphilis, and that had we waited we should probably have seen a generalised secondary syphilide develop. I base this chiefly on the intense headache and malaise and the rapid change in the appearance of the patient.

At all events I consider it a most instructive case, and lay great stress on the fact that however certain the original diagnosis may be, one must keep an open mind when the course of the case proves different from what one would expect.

A CASE OF SPOROTRICHOSIS.

By WALLACE BEATTY, M.D.,

Hon. Professor of Dermatology, University of Dublin; Physician to the Adelaide Hospital.

As far as I am aware no case of sporotrichosis has hitherto been reported from Ireland.

I have been on the look-out for sporotrichosis for some years in my dermatological clinic at the Adelaide Hospital, and only met with it in May of this year, 1917. I may have seen sporotrichosis without recognising it, as the clinical appearances resemble tubercular and syphilitic affections; but as I have been on the alert, I cannot, I believe, have missed many cases.

Accordingly, it may be concluded that in Dublin at any rate, and probably in Ireland generally, sporotrichosis is a rare disease.

History (May, 1917).—W. P—, aged 15½ years, works in a brush factory where he handles African bass.

Two months ago the boy noticed a small pimple on the front of his wrist just over the base of the metacarpal bone of the thumb. A piece of bass stuck into the pimple and caused it to bleed a good deal. The pimple after this did not heal, but became a small sore. Four days after the prick by the bass he noticed a small red lump about 4 in. above the sore. After this another lump appeared between it and the primary sore. Since then four smaller lumps, in a straight line with the first two, have appeared higher up, two in the upper part of the forearm, and the other two at the inner side of arm.

Appearance (May, 1917).—On the flexor aspect of the wrist he has an almost healed ulcer covered with a scab.

Two inches above these is situated over the lower end of the radius an oval red swelling, the long axis of the swelling running in the course of the forearm.

The swelling is soft to the touch and gives fluctuation.

Two inches above the first swelling is another oval swelling, soft and fluctuating, the long axis in the direction of the limb. Above this is another similar elongated swelling, made up of four small nodules close together. An inch above this is a small inflammatory nodule.

Following up the line of swellings in the forearm from the primary

lesion upwards one sees a small red elevation in the lower third of the arm to the inside of the biceps, and 2 in. higher a little nodule can be felt under the skin.

Between the nodules can be both felt and seen a hard cord running up the forearm and uniting the swellings. See Fig. 1.

When I saw the boy on the day of his first visit to the Adelaide Hospital I made the following note: "Lymphangitis: inflammatory nodules running up the forearm joined to each other by a lymphangitic cord. An unusual case."

Suspecting sporotrichosis I drew off with a sterilised needle attached to a sterilised syringe some pus from one of the inflammatory swellings and introduced this pus into a tube of sloped maltose agar. In about six or seven days a growth appeared—a number of small whitish convex



FIG. 1.

elevations, aptly compared by a nursing sister, Sister Adams, to the appearance of milium. In a few days the culture became brown and finally black.

Subcultures on sloped glucose and maltose agar made by the stroke method yielded after some weeks a typical raised plaited (convoluted) black culture, with delicate radiations into surrounding medium. The convolutions of the culture resembled somewhat the sandcasts made by worms on the sea-shore (see Fig. 2).

Examination of the culture histologically showed the typical mycelium and spores of sporothrix—mycelium slender, about 2 mm. in diameter, septated and branching, and spores, pear-shaped or oat-shaped, 3-5 mm. in length, attached to and arranged round the mycelium, in some places so closely together as to hide the mycelium and form strings or cylindrical masses of about 10 mm. in diameter.

There were many scattered spores detached in the process of preparation.

Prof. J. Alfred Scott kindly examined my cultures and microscopic preparations and confirmed the diagnosis.

I found two methods of staining good. One suggested to me by Prof. Henry Dixon, Professor of Botany, Trinity College, Dublin, viz. stain the dried and fixed culture with 50 per cent. Delafield's logwood for ten minutes; then wash, dehydrate with alcohol, and mount in Canada balsam.

The other, the formic acid and borax methylene blue method, which Sabourand recommends for staining the hairs and scales of ring-worm.

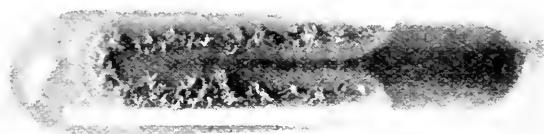


FIG. 2.

Technique.—A drop of water is placed in the centre of a slide. A minute amount of the culture is taken with a sterilised platinum needle and transferred to the drop of water, and very gently moved about in the water to dissociate it, if contact with the water does not immediately lead to dissociation. Rough treatment would separate the spores from the mycelium.

The slide is then placed in an incubator till the water has evaporated, or it may be allowed to dry in the air.

The film is then fixed by placing over it a drop of formic acid, and then heating the slide till the formic acid steams, letting it cool and heating again; this process is repeated a few times.

The slide is then washed in water.

The fixed film is then stained with borax methylene blue (Sahli).

When staining hairs of ringworm a minute is usually sufficient. But in the staining of sporothrix, Mr. Pellissier (who was acting as my clinical clerk, and gave me much assistance in the investigation of the case) found that better preparations are obtained by leaving the culture in the stain for several minutes; then wash, remove excess of colour, and dehydrate with absolute alcohol; then xylol balsam.

Short staining, while it stains the spores, is not sufficient for the mycelium. A prolonged staining brings out the mycelium exceedingly well.

This case is an example of the lymphangitic form of sporotrichosis, starting with a primary lesion "the sporotrichotic chancre."

The boy brought me some of the bass used in the factory. I could not discover sporothrix in this either by direct examination of the bass, histologically, or by culture. Presumably the skin was infected by sporothrix in the bass, but I failed to prove it.

ROYAL SOCIETY OF MEDICINE.

DERMATOLOGICAL SECTION.

MEETING held on July 19th, 1917, Dr. J. H. STOWERS, President of the Section, in the Chair.

Dr. F. PARKES WEBER showed a case of *macular atrophy of the skin, showing the early raised erythematous stage, and associated with ordinary vitiligo*. The patient was a man, P. K—, aged 64 years, who had typical vitiligo of the hands and penis. He did not know how long it had been present in the latter position, but in the former position (the hand) he had noticed it for the last nine or ten years, always better marked in the summer than in the winter. He did not know how long he had had the macular atrophy of the skin; it gave rise to no pruritus nor subjective symptoms, and he was not indeed aware of its presence before he came to the hospital. It was, however, quite characteristic. The spots, which were mostly not larger than a threepenny piece, were of two main types, with some intermediate forms. Many of them were slightly raised and reddish or reddish-brown, but most of them were spots of colourless *anetodermatous* skin, with a loose, crumpled cigarette-paper-like surface, which was

sometimes slightly depressed. It was clear that the raised erythematous spots represented an early (inflammatory) stage in the development of the colourless atrophic "anetoderma" stage, that was to say, the true *maculæ atrophicæ*, from which the disease derived its name. There were likewise a few spots representing intermediate stages (as already stated) between the erythematous (raised) and the colourless (atrophic) types. The spots (both types and also the intermediate forms) were distributed over the trunk and limbs, but the face, head, and neck were not affected. The spots were specially numerous over the waist region of the trunk, and the proximal portions of the limbs (thighs and upper arms) were more affected than the distal portions. In some parts the spots were arranged in groups or clusters of various shapes.

The patient likewise had old cardiac valvular disease (aortic reflux), without any definite history of rheumatism. There was lamellar (zonular) cataract, probably congenital, in both eyes, together with corneal opacities apparently dating from childhood. He thought he never had syphilis, and the Wassermann reaction was negative.

Macular atrophy of the skin (*maculæ atrophicæ*) was probably much more common than was generally supposed, but was not very striking, and patients did not usually pay any attention to it or seek any medical opinion about it. It was, indeed, perhaps as common as vitiligo, though the latter condition was very obvious and often annoyed the patient and attracted the attention of his friends. The association of the two conditions—both relatively common ones—was probably therefore merely a chance coincidence in the present case. An ætiological connection of both conditions with syphilis had been discussed by some writers on the subject, but syphilis was very common and therefore likely to be occasionally associated with such relatively not uncommon conditions as vitiligo and macular atrophy of the skin.

In the present case there was, as already stated, no history of syphilis, and there was no evidence pointing to it, such as a positive Wassermann reaction or syphilitic leucoderma of the neck. In a recent case (1916), however, the patient, K. P—, a man, aged 62 years, had certainly had syphilis. The *maculæ atrophicæ* were scattered over his trunk—circular patches of loose anetodermatous wrinkled skin, like crumpled cigarette paper, mostly not raised, though some

were slightly raised above the general surface. Their presence had been noticed during the last fourteen months or so, and at first they may have been slightly reddish. The patient had no typical syphilitic leucodermia of the neck, but he had a positive Wassermann reaction (tested on various occasions) and the remains of syphilitic iritis. In another case, recently (1916) shown me by Dr. G. F. Stebbing, at the Lambeth Infirmary, the patient, an elderly woman (with hemiplegia, probably due to cerebral hæmorrhage), had symmetrical clusters of anetodermatous *maculæ atrophicæ* on the front of her wrists and had likewise a similar group on the left mamma. They had apparently been present for some years. He did not know whether there was any evidence of previous syphilis or not.

Dr. F. PARKES WEBER showed a case of *congenital hirsuties of the Simian type in a child*. The patient was a girl, E. W—, aged 4 years, born in London. The hypertrichosis affects the forehead, temples, sides of face, the back (especially the upper and lower portions and the vertical line over the spinal column), and the upper and lower extremities. The regions of the axillæ, groins, pubes, and front of the trunk, and the neighbourhood of the mouth and nose, were not hairy. The child had corneal opacities from old Phlyctenular keratitis, and had been treated for adenoid vegetations, enlarged tonsils and otorrhœa, but otherwise showed no signs of disease, and was mentally normal. There was no marked prognathism of either jaw, and, when the jaws were closed, the lower teeth came behind the upper teeth, as they did in ordinary individuals. The nose and lips and cheeks were thick, and the bridge of the nose was low. There was nothing to suggest the presence of a hypernephromatous tumour in the abdomen, and a Röntgen skiagram of the base of the skull showed nothing abnormal about the pituitary fossa. There was no sign of any precocious or abnormal sexual condition. The moderate degree of hirsuties present was rather of the "Simian" type (see further on), than of a type suggesting suprarenal or other endocrine disturbance. In the present case it was, according to the mother, congenital, but not familial. The mother's two other children (a girl and a boy) were said to be quite normal, and there was no history of hypertrichosis in any other members of the family. The mother was Irish, the father (deceased) was Austrian (not Hebrew Austrian). There

was the usual history of "maternal impression." The mother stated that whilst she was pregnant, about three months or so before the birth of this child, she used frequently to see a monkey, which belonged to a lady in the neighbourhood.

Excluding cases of local hypertrichosis of the "*nævus pilosus*" kind, he thought cases of hypertrichosis or hirsuties might be roughly classified as approximating more or less to one or the other of two main types. In the *first*, which might be termed the "Simian type," the hypertrichosis was congenital or developmental, and sometimes familial, and might be regarded as an example of so-called "degenerative" reversion. In spite of the absence of any similar condition in the family, he regarded the present case as a minor example (that was to say, of relatively slight degree) of the "Simian type." The *second type* was associated with, and secondary to, disorders of the endocrine organs (suprarenal glands, etc.), and was generally not congenital and not familial.

Dr. F. PARKES WEBER showed a case of *unilateral striæ atrophicæ (striæ cutis distensæ) of the thorax*. This case is reported on p. 247 of this number.

Dr. E. G. GRAHAM LITTLE showed a case of *circinate erythema, possibly the "Erythème annulaire centrifuge" of Darier*. The patient was a business man, aged 40 years, of excellent physique and in good general health. The eruption began in the summer while the patient was at the seaside, in the form of rings with a strong resemblance to ringworm. They disappeared with the application of iodine, and indeed spontaneously, but recurred, apparently usually in the summer. As the patient was accustomed to spend this season at the sea, it was thought that this had some effect in the causation until the condition developed when he was at home at Horley. Repeated examinations for the fungus of ringworm were always negative, and this diagnosis had to be abandoned. The eruption was usually seen in the same sites as at present, that was a copious distribution on the thighs, lower sacral region and buttocks, the abdomen and the fore-arms. The rash at present consisted of rings of erythema, but in the earliest stages these were said to begin with a pink papule, speedily spreading centrifugally as in the affection described by Darier, to form rings which might reach the size of half-a-crown or

more. The skin enclosed in the involuted ring was unaltered, and as the margin enlarged the earlier vividly pink raised edge faded and flattened. There was no scalliness to speak of, and scrapings yielded very little material in contrast to what one found with ringworm. Occasionally the initial lesion developed into a patch rather than a ring, that was to say, the involution in the centre was incomplete. Itching was very moderate in degree, but fairly constant; vesication had never been noted, and the itching was not comparable with that of Dermatitis herpetiformis.

The practically spontaneous retrogression, the periodicity, and the lesion seemed to approximate the condition to the Erythema multiforme group. But the persistence of the lesion was much greater, for individual lesions last for several weeks or even months. The Wassermann reaction was negative.

The cases of gyrate erythema described by Colcott Fox in the *International Atlas of Rare Skin Diseases*, differed from these in the ultimate development of vesicles, which made Fox suggest the possibility of these being instances of Dermatitis herpetiformis, and Darier takes it as established that this was their nature. The case which the exhibitor showed at this Section a few months ago as possibly an example of "Érythème annulaire" also developed in such a manner as to make it quite certain that it was a Dermatitis herpetiformis. Itching in that case had been severe from the beginning, so that this development was perhaps not wholly unexpected.

Dr. S. A. CLARKE said the patient came to him each year immediately after his annual sea bathing. He had distinct itching, but he never visited him until the patches were distinctly circinate. He thought it was ringworm, and treated him for that, and each year it cleared up. This year he pointed out that he had not been to the sea, yet the lesions came out again. The patches had not been treated, and they had spread very much. The desquamation did not show so much now as it did. He had itching at times. Microscopical examinations had been made, but the ringworm was not found. The regions mostly affected were the buttocks and lower part of the abdomen and the upper part of the thighs. Sometimes there were one or two patches on the inside of the arms.

Dr. H. G. ADAMSON said that several years ago he showed a patient with an almost exactly similar condition, who had had these rings persisting for months, and then disappearing, only to reappear later. Previously he had had a case in a child. In both cases his first diagnosis was ringworm; then he concluded they were the condition Dr. Fox had described as persistent circinate erythema. In both cases the eruption disappeared on taking salicylates, but came back afterwards.

Dr. E. G. GRAHAM LITTLE showed a case of *Lupus erythematosus following upon ringworm of the scalp in an adult treated with X-rays*. The patient was a single lady, aged 37 years, who rather more than five years ago developed a condition of the scalp which was diagnosed as "eczema" by one general practitioner, and treated as such for a year. She was then seen by another general practitioner, who made the diagnosis of "ringworm," which he states was confirmed by a microscopical examination of hairs sent for this purpose to the Kent bacteriological laboratories. This diagnosis was supported by the X-ray operator, another general practitioner, who in his excellent notes of the procedure he adopted in X-raying, explicitly says the tinea was "diffuse and general." The patient, however, seemed to be positive as to the "redness" of the parts prior to X-raying, and declared that the areas then involved were much less than at present, and that the invasion of the scalp had progressed very steadily and rapidly in the past two years, the whole vertex being now affected. She was submitted to X-rays on August 5th, 1914, the entire head being exposed by the Kienböck-Adamson method, only one application being made to each of five areas marked out on the scalp. The hair fell out in due course all over the scalp, but according to the patient's recollection the permanently bare areas resulting are of much wider extent than previously to that treatment, and these areas were spreading, as had been stated. The present condition was quite typical of *Lupus erythematosus*, and there was a fresh invasion behind the ears which was very characteristic. It was of course arguable that ringworm of the scalp in an adult being so rare, and no source of infection having been established, the diagnosis of that condition was erroneous, and that the original disease was in fact *Lupus erythematosus*, which might well have been accentuated, but not initiated, by radiation. The patient, naturally enough, was inclined to attribute the baldness to an X-ray burn, and it was chiefly to dispel this attribution that he showed this case.

Dr. G. PERNET had a similar case, an older (female) patient. It was diagnosed as ringworm, but he was not sure that it had been microscopically examined. It was undoubtedly a case of *Lupus erythematosus*, and it had been treated by X-rays, which certainly aggravated it. The case was a very obstinate one. He doubted if a microsporon was originally present in Dr. Little's case, notwithstanding the report.

Dr. S. E. DORE showed a case of *small-spored ringworm* in a woman, aged 37 years. The patient attributed the disease to handling dirty pay-books, which the soldiers often carried in their caps, in an Army Pay Office about three months ago, but that was scarcely a likely



FIG. 1.—Dr. J. H. Stowers' case of congenital ichthyosis.

source of infection. There appeared to be no definite history of infection from animals, although there was a suspected cat in the house, which was examined and found to be healthy. An interesting point concerned the duration of the disease, some authorities maintaining that these were really undiagnosed cases which had persisted

from childhood. There was evidence that this was not so here, because the patient consulted Dr. Adamson five or six years ago for loss of hair, and his diagnosis was seborrhœa of the scalp. The question arose as to what the treatment should be. She had asked for X-ray treatment, but the case seemed to be improving a great deal under the present treatment with ointment, and his experience, in the few cases he had seen in adults, was that the condition cleared up in them more quickly than in children. Another important point



FIG. 2.—Dr. J. H. Stowers' case of congenital ichthyosis.

was whether there was more risk in X-raying the scalp of a patient of this age than that of a child. He had applied the rays to a certain number of cases of Alopecia areata in adults and the hair had returned satisfactorily, at any rate, on the places not affected by the alopecia.

Dr. J. H. STOWERS showed *photographs of a severe case of congenital ichthyosis*. The patient (male), aged 51 years, presented an unusual tessellated appearance upon the limbs, with exceptionally large elevated plates of thickened epidermis like crocodile hide (Ichthyosis sauroderma) (Figs. 1, 2).

Dr. GEORGE PERNET showed a case of *multiple Morphoeo-sclerodermia*. The patient was a girl, aged 11 years, and the changes in the skin were noticed six weeks ago. Now, over the lumbar region and the scapulæ, there were faintly violaceous areas with here and there oval patches of slightly ivory-white sclerosed glistening skin, bordered by pale lilac rings. These oval patches were inclined to be symmetrical about the back.

Dr. GEORGE PERNET showed a case of *extensive naevus of the trunk and extremities, involving the palms and soles*. The patient was a boy, aged 6 years. According to the mother, she first noticed the condition of the skin a week or two after birth. The naevus occupied a corset area of the trunk and upper part of the thighs and buttocks, the fronts of the knees, with a boot and glove-like distribution about the feet and hands, the soles and palms being involved. The skin in this area was dry and rough to the touch, with striations, giving a curious variegated appearance, especially in front. The fronts of the knees exhibited a rough patch on each. The backs of the hands and dorsa of the feet were slightly affected, but the palms and soles were rather dirty-looking and rough, like a keratosis. Running up about the tendo Achillis were somewhat rough and red narrow linear bands, like a mild degree of naevus linearis.

Altogether the naevus was of a mildy verrucose type. Quite recently faintly pink scaly patches had appeared about the right elbow and under the left clavicle. On scratching up the scales bleeding points could be made out pointing to a mild degree of psoriasis, which some would perhaps consider seborrhœic, especially as the scalp is dry and scurfy. In any case these two patches were on the borderland of the aforementioned conditions. The boy was in good health and well-nourished. There were no indications of syphilis in either mother or child to account as a factor in the congenital malformation of the skin. The Wassermann reaction in both was negative.

Dr. GEORGE PERNET showed a case of *Acne varioliformis*. A woman, aged 34 years, a railway car cleaner, who had had an eruption about the border of the scalp and forehead for seven months. There the elements were characteristic of *Acne varioliformis*, the necrotic lesions going back into the scalp in the usual way. More

recently she had had a similar roughly triangular area, with the base upwards, of similar elements on the centre of the back. There was also a small group on the centre of the chest in front. It was for this unusual distribution that the patient was shown. She was improving on mist. ferri perchlor. alone, without any local treatment.

Dr. GEORGE PERNET showed a case of *Acne agminata* (of Radcliffe-Crocker). The patient was a woman, aged 49 years, with a typical *Acne agminata* eruption of the face. The eruption had lasted about five months. He did not remember ever seeing *Acne agminata* in a woman before. In the cases he had seen exposure to heat, or strong sunlight, and accompanied by sweating, were the rule. There was no exposure of the kind in this instance. He examined one of Radcliffe-Crocker's cases* histologically, and found that the sweat apparatus was mainly involved. He did not consider these cases were tuberculous in origin—i. e. toxi-tuberculides. Quite recently Chalmers and Martyn, of Khartoum, agreed as to the pustular lesions with his histological results.† Nor did he consider these cases the same as *Acne varioliformis*, though he noticed Stelwagon included *Acne agminata* under the *Acne varioliformis* heading.‡ They were, no doubt, toxic in origin in some way, and in the present case the state of the teeth and gums would be quite sufficient to account for the outbreak on the face. The patient had improved a little since she had been on lot. calaminæ and mist. ferri perchlor., as when she first came under observation on June 5th last, the eyes were very puffy, and the face somewhat swollen generally.

Dr. J. H. SEQUEIRA showed four cases of dermatitis due to high explosives used in the recent air raids. Two of the cases were the result of the raid on June 13th. Both patients had suffered severely from a pompholyx type of eruption, beginning nine days after exposure to irritation. The hands were intensely stained an orange-yellow colour immediately, and vesicles developed on the palms and sides of the fingers on the ninth day. In both the bullæ became con-

* Pernet, *Brit. Journ. Derm.*, xiv, 1902, p. 131. See also Radcliffe-Crocker, *Diseases of the Skin*, 3rd edit., ii, fig. 70, p. 1096.

† A. J. Chalmers and A. C. F. Martyn, *Proc. Roy. Soc. Med.*, 1916-17, x (Sect. Derm.) pp. 23 *et seq.*

‡ Stelwagon, *Diseases of the Skin*, 7th edit., p. 1055.

fluent, and ultimately the epidermis peeled off. Both had had slight pyrexia and eosinophilia. The other cases, caused by the raid of July 7th, illustrating the staining of the skin and early vesication.

The powder which was the cause of this dermatitis was under investigation. He had had private information that it was not only tri-nitro-toluene, but that there was hexamethyl-diphenyl-amine in addition. It was something fresh in explosives.* Hexamethyl-diphenyl-amine was also known as aurantia, which had long been recognised as a cause of dermatitis.

Dr. ALDO CASTELLANI† read a short paper on "*Accladiosis*." He said that cases of accladiosis having been very recently observed in Europe (Balkan Zone) by himself, Laurie, and others, it might perhaps be of interest to give a brief general account of the condition.

The condition had been observed by him since 1907 in Ceylon, but he did not fully describe it until last year. Cases had been observed in Ceylon, the Federated Malay States, and Macedonia.

In a well-marked case ulcerative lesions were present all over the body, though they were in smaller number or absent altogether on the face, scalp, palms, and soles. Most of the ulcers were sharply defined, roundish, or oval, with red granulating fundus. In many cases there was abundant purulent secretion which collected and dried up in thick yellow crusts covering the ulcers. Gumma-like nodules and furuncle-like lesions might also be observed. The superficial lymphatic glands might be enlarged. The lesions in most cases gave very little pain, or none at all; itching was often completely absent, but occasionally the patient complained of slight pruritis. The general condition of the patient was not seriously affected for a long time, but he often complained of a certain degree of weakness and discomfort. Not infrequently there was serotine fever. The blood had been examined in two cases in the Tropics: in one case in the Balkan Zone; Wassermann reaction negative. In the first two cases red blood corpuscles and hæmoglobin were slightly below the

* A fuller description of cases is given in the *Brit. Med. Journ.*, August 4th, 1917, p. 148.

† Castellani, Aldo. "Notes on a New Ulcerative Dermatomycosis," with Report on the Causative Fungus by E. Pinoy, *Brit. Med. Journ.*, October 7th, 1916, p. 486.

normal; in one there was eosinophilia (5 per cent.) which might have been due to a concomitant *Ascaris lumbricoides* infection. In the Macedonian case, the blood of which was examined, there was a distinct leucocytosis (16,000 leucocytes) of the polymorphonuclear type; in this patient there was abundant purulent secretion and serotine fever, which on some days reached 102° and 103° F.

The histo-pathological investigation of the condition was far from completed. From the preliminary investigation it would seem that the lesions were very similar to those one saw in sporotrichosis, and that three types of lesions might be distinguished: (1) An epithelioid or tubercloid type, with presence of giant cells; (2) a lympho-connective tissue type (syphiloid); (3) polymorphonuclear type (ecthymatous).

The condition was caused by a fungus, which, as stated, he isolated in Ceylon. Cultures were sent to Prof. Pinoy, of the Pasteur Institute, who very kindly investigated it botanically and classified it, giving it the name of *Accladium Castellani* (Pinoy, 1916). He quoted a portion of Prof. Pinoy's description:

"The growth on artificial media (such as carrot, potato, glucose-agar) consists of many small roundish masses, which later on may coalesce, covered by spiculated formations, giving them a prickly appearance, and consisting of erect, straight filaments, parallel to each other, or at times interlacing. These filaments are approximately 2 microns in diameter, and carry laterally pseudoconidia of variable shape, cylindriciform, pyriform, or spherical, attenuated in size at their points of insertion. Most of these pseudoconidia are 4 microns in length, with a breadth of 3 microns. This type of fructification recalls the type *Accladium* described by Bodin in certain species of the genus *Trichophyton* (Malmsten, 1848):

"These pseudoconidia become detached and then develop by sprouting, and mycelial filaments are formed. Certain filaments produce spherical chlamydospores arranged in small strings, as found in certain fungi of the genus *Fusarium*. These small chains of chlamydospores are very frequently terminal, the dimensions being variable—8 to 10 microns."

In cultures on carrot and potato the colonies were white, on glucose agar often amber colour. Very old cultures might show a certain amount of pigmentation.

A positive diagnosis could be made with certainty only by cultural methods. The microscopical examination alone was of very little use, hyphomycetic elements being as a rule absent microscopically in the scrapings from the ulcers and contents of nodules. The material should be inoculated in glucose-agar tubes. Four to eight days after inoculation small, yellowish, amber-coloured colonies appeared; they enlarged fairly rapidly, became hemispheric, and often coalesced in a knotty mass. At times the colonies might not fuse together; each colony then remained separate, reached a large size, and occasionally presented peculiar radiating furrows as seen in certain species of trichophytons. In many cases where the material had been collected from ulcerated lesions, the fungus grew in symbiosis with a coccus and it might be difficult to separate the two organisms. The malady was often taken for a syphilitic condition. The history, the negative examination of the lesions for spirochaetes, the failure of mercury and salvarsan treatment, would exclude it. When the lesions were covered by raised, thick, bright, yellow crusts the condition must be differentiated from yaws; in accladiosis, on removing the crusts, ulcers were found, while in yaws, the typical frambæiform nodules would be seen; in scrapings from yaws lesions the spirochaeta would be found. Accladiosis could be differentiated from sporotrichosis and other affections of hyphomycetic origin by cultural methods.

The course of the disease might be very long, and there was very little or no tendency to spontaneous cure; but if a proper treatment was carried out a cure could be obtained fairly rapidly in the majority of cases. A few cases responded to treatment extremely slowly.

Potassium iodide given in full doses (20 gr. t.d.) acted satisfactorily. The drug appeared to act at times more rapidly if given according to Prof. Pinoy's method—viz. in conjunction with a salt-free diet. If potassium or sodium iodide was not well borne, sajodin and other similar preparations might be tried, but the result was not so satisfactory. Mercury and arsenic had no effect on the course of the malady. As regards local treatment, it was sufficient to keep the ulcers clean by using a weak mercury perchloride lotion.

MEETING held on October 18th, 1917, Dr. J. H. STOWERS, Vice-President of the Section, in the Chair.

The retiring President, Dr. J. H. STOWERS, in a short valedictory

address, recalled the fact that ten years had elapsed since their lamented friend and first president, Radcliffe Crocker, enjoined them to work earnestly and harmoniously to make their Section a success—"each for all and all for each." Under the guidance of his (the speaker's) distinguished predecessors, these hopes and wishes had been completely realised and, aided as he had been by competent and willing officers, he ventured to affirm that the two Sessions for which he had been more immediately responsible had not fallen short of the preceding ones either in interest or usefulness. In the terrible times in which they were living, with the exigencies of a world-wide war still pressing heavily upon them, and its consequent indescribable suffering and sorrow abounding in every quarter, they had been unavoidably deprived of the presence and co-operation of a number of their active members; nevertheless, the attendances at their meetings had been exceptionally good, and their visitors unusually numerous.

Incidental to their department, although not strictly the direct concern of their Section, he was constrained to refer to the inestimable work of the successive editors and sub-editors of their Journal now known by the more comprehensive title of *The British Journal of Dermatology and Syphilis*, and which it had been their good fortune to possess since 1889, upwards of twenty-nine years.

The conditions of the time made it unusually difficult for their present editor to obtain material for the quarterly volume for which he was responsible, and to meet the additional cost of publication, he ventured to invite all those who had material and leisure at their disposal to contribute papers and record cases in their common interest, not forgetting the fact that every additional annual subscriber to their Journal helped to relieve the burden, which was not inconsiderable, in both directions, educational and financial.

It had been a source of much satisfaction to him that during his term of office the final Report of the Royal Commission on Venereal Diseases had been issued. The Commission, as they were aware, was appointed in 1913 "to inquire into the prevalence of venereal diseases in the United Kingdom, their effects upon the health of the community, and the means by which those effects can be alleviated or prevented."

The summary of the Commissioners' recommendations were now well known, and he trusted universally adopted. The character and

thoroughness of the inquiry were as complete as could be desired, and the whole Report stood as a monument to the indefatigable and successful labours of the Commissioners themselves for which the whole community should be profoundly grateful. Notification was duly considered, but at the present time rejected, as likely to be prejudicial and dangerous. However, it was not impossible that further legislation might be obtained in this direction when the knowledge of the terrible nature of these diseases and their consequences was more general.

It must be noted that the National Council for Combating Venereal Diseases should be accepted as an authoritative and complete body for the purpose of disseminating knowledge concerning this subject, which was of the greatest national importance.

Both as a member of the Royal Commission and as Chairman of the Propaganda Committee of the National Council for Combating Venereal Diseases, their former president, Sir Malcolm Morris, had rendered yeoman service, and this was a suitable opportunity for conveying to him their united thanks for the valuable assistance he had rendered to the profession, as well as to the public, in dealing with this subject, the importance of which could not be overrated.

He could not relinquish the chair without endeavouring to convey to them his grateful appreciation of the high honour they had conferred upon him in electing him their President, and also his very cordial thanks for the loyal assistance and support he had received from them all throughout his term of office.

They had worked harmoniously together for the common weal, and he hoped had succeeded in some degree in advancing their knowledge in one of the most important departments of practical medicine. Let them, therefore, continue to utilise the increasing opportunities afforded them; for while, as it had been said, they might have reached the pericardium, much indeed had to be accomplished before they arrived at "the heart of knowledge."

Let them continue to cultivate the spirit of unity and friendship, that friendship which Lord Clarendon once wrote, "hath the skill and observation of the best physician, the diligence and vigilance of the best nurse, and the tenderness and patience of the best mother."

Dr. J. H. SEQUEIRA showed a case of *sclerodactyly*. The patient

was a girl, aged 12 years. She came to London Hospital in 1914, when she was aged 9 years, suffering from small-spored ringworm of the scalp, and while she was under treatment there, Dr. Oliver, who was in charge of the ringworm cases, noticed the condition of her hands, and brought the patient to him. They recognised the case as one of sclerodactyly. There was at present a very marked degree of scleroderma, beginning at the extremities—the hands and feet—and the face had the “marble statue” appearance, which was very characteristic. There was little of importance in her history, but the condition was supposed to have dated from a fright. She had had chicken-pox, scarlet fever, and measles. She had not had rheumatic fever. She had also suffered from Herpes zoster, and, as far as they could make out, the scars of the zoster were the only alterations in the skin of the abdomen and the chest. So that the examination should be complete, a Wassermann test was done, and it was negative. A blood-count showed an abnormality in the lymphocytes, 18·5 per cent., between twice and thrice the normal proportion. She had been given thyroid and various other treatments, but, he regretted to say, without any marked improvement. Recently she had had a little sepsis over one of the knuckles, the skin over it being very tight.

Dr. J. H. SEQUEIRA showed a case of *so-called multiple idiopathic pigment sarcoma of Kaposi*. The patient was a man of Russian origin, aged 40 years. When he was first seen he had a purplish eruption, of papular character, which suggested Lichen verrucosus. The history given was that he had had the trouble two years. His hands showed well the “purple congestion” described by Hutchinson, while the lower extremities showed infiltration of a purplish colour with numerous small nodules. The Wassermann reaction was negative. His last case, which he showed at the International Congress, 1913, he had had steadily under his care, and great benefit followed treating it by means of X-rays: the swellings went down, and the skin became fairly normal in colour; the patient was also more comfortable. He proposed to employ the same treatment in this case.

P.S.—Since the case was demonstrated the microscopical examination had shown the excised skin to be the seat of a granulomatous infiltration. He thought the time had now come to exclude these cases from the group of sarcomata.

Dr. E. G. GRAHAM LITTLE showed a case of *Acne scrofulosorum*. This was an extensive eruption of *Acne scrofulosorum* in an obviously tuberculous boy, the condition having an unusually long history. The eruption dated from the age of 7, and he was now 14. A new eruption had occurred on the nose within the last two months. The question was whether that eruption was an extension of the tuberculide, or whether it was commencing *Acne vulgaris*. Besides the skin condition he had chronically swollen joints and enlarged glands in the neck. The face condition was the same as on the other parts. The present distribution was chiefly on the legs, thighs, hands, and forearms, where there was an extensive, closely aggregated eruption of typical follicular papules and pustules. The extremities were blue and cold, and the boy was ill-developed for his age. There was chronic Alopecia areata as well, of many years' duration, the scalp presenting numerous bare areas the size of a florin.

Dr. E. G. GRAHAM LITTLE showed a case of *Ulcus molle serpiginosum*. This was almost a repetition of the case he showed eight or nine months ago of the same disease, that having been the first instance of the condition which had been shown before the Section. The history in the present case was similar: a bubo developing in the left groin five years ago, was followed by chronic ulceration, spreading along his left side upwards and downwards. The extent of the ulceration was very remarkable, namely upwards to the waist line; downwards to the knee. This man had been under the inoculation department of the hospital for some months, where several attempts had been made to grow the bacillus of Ducrey. The attempts to grow it failed, but it was thought bacilli had been seen in the pus. For several years he had been treated at the Lock Hospital for syphilis, though the Wassermann reaction had been negative all the time, and there was no local improvement. At present there was active ulceration at the lower border of the affected area, near the knee; on the rest of the site affected healing had taken place, with the characteristic scarring; between the two large plaques of scarred tissue on the thigh and the abdomen respectively, there was a small strand, about half an inch thick, of unaltered skin, like an isthmus connecting two continents on an atlas.

Major GRAY remarked that all the cases of this type which had been reported had arisen from a ruptured bubo; was Dr. Little able to say whether this condi-

tion had ever started from the original soft sore. One constantly saw phagedæna starting from a soft sore, and he wondered whether this was really the same condition. Perhaps it was because phagedæna attracted more attention, and so got more vigorous early treatment, that they did not see it spreading over the body, though he had seen one case in which the whole penis was destroyed and a large serpiginous ulcer covered the whole pubic region.

Dr. J. J. PRINGLE regarded Major Gray's observation as of capital importance. None of the cases which had been reported had—as far as he knew—started from the original ulcer molle, but from the bubo. He had seen four in a comparatively short time, and about a year ago he had a case under his own care at Middlesex Hospital in which this process began and extended for only about two inches around the bubo which had been incised. Fortunately the ulcerative condition was arrested, probably spontaneously. Such a happening suggested to him that slight degrees of this serpiginous process might not be very rare. He could not help thinking that in this case there were two separate areas of disease starting from different foci, for he could not see any continuity between the large area of disease on the abdomen and upper thigh and that on the lower part of the thigh; there seemed to him to be a zone of perfectly healthy skin between the two.

Dr. GRAHAM LITTLE (in reply) said: The history of the three cases he had seen had been consistently the same: a bubo had burst and ulcerated, and the ulceration was very chronic, shading insensibly into the more superficial ulcers which they saw. An initial and fairly extensive ulceration directly spreading from a bubo was almost essential. In answer to Dr. Pringle, he thought the condition spread upwards to the abdomen and downwards to the thigh from the bubo in the groin.

Dr. GEORGE PERNET showed a case of *primary syphilitic chancre of the umbilicus*. The patient was a young man, aged 24 years, a discharged soldier. The umbilicus presented a prominent dome-shaped lesion, with a depressed reniform ulceration occupying the centre. The latter had broken down in its central part and purulent fluid could be readily squeezed out. The lesion was over an inch in its basal diameter and raised quite half an inch above the level of the skin. The sore had commenced five weeks previously and was very indurated. His diagnosis was primary chancre. This was confirmed by further investigation: marked inguinal and especially femoral adenitis. The post-sterno mastoid and submaxillary glands were also typical. There was no axillary adenitis. The tongue was ulcerated, as also was the posterior pharynx. There were small pigmented patches about the neck and trunk (involted secondary syphilides). There were also secondary syphilides on the left palm, but none on the right. The right hand was *en griffe*, showing muscular atrophy, as did also the right forearm, a result of a wound of the arm involving the nerves. About the anus there were exuberant condylomata.

There was nothing about the genitalia. The diagnosis was obviously syphilis. But to convince the sceptics, the umbilical sore was examined for treponemata, and these were readily demonstrated. Moreover, the Wassermann reaction was found to be positive.

A primary chancre of the umbilicus was rare, especially in a man, and it was the first one he had had under his care, though he had seen primary chancres of the abdominal and pubic regions. The patient had had three intravenous injections of galyol, and also mercury, with great benefit. The primary sore had involuted to a great extent, but some induration could still be felt.

Dr. E. G. GRAHAM LITTLE showed a case of *Adenoma sebaceum*: *Pringle type*. This girl showed a perfect example of *Adenoma sebaceum* of the type named by their French colleagues after Dr. Pringle. It was of congenital origin, and associated with fibroid tumours on the back of the trunk, a common association. Over the sacrum there was a patch about the size of the palm of the hand, covered with the characteristic pale fibrous tumours. She also showed the mental backwardness typical of the disease. She was in a special school for backward children. She was aged 14 years, and was in Standard IV. There was a history of fits, probably epileptic, between the ages of two and four; in a family of eight she was the only one who had such symptoms.

Dr. J. J. PRINGLE said that with regard to his name being associated with this "type" of *Adenoma sebaceum*, it was an extremely graceful compliment, but, like many compliments, it was quite undeserved. The vascular or telangiectatic type cases—three in number—which he described in his paper in 1890* were all borrowed from French sources. The first two were observed by Vidal and fully reported in the descriptive catalogue of the St. Louis Hospital Museum. The third was narrated to him by his friend Dr. Hallopeau in a personal communication, and the model was in the same museum, although apparently undescribed in the catalogue.

The CHAIRMAN had seen a case recently in private practice, but, as had been said, this disease was more often met with in hospital patients. The case he showed there last year was the daughter of a labourer. Treatment by electrolysis was a tedious method if the lesions were numerous, but he had had good results with CO₂, and also from the repeated application of liquefied carbolic acid, which he would recommend in this case.

* *Brit. Journ. Derm.*, 1890, p. 1, *et seq.* It was interesting to him on re-reading the article to note that the classification of *Adenoma sebaceum* as a form of "naevus" was discussed and approved.

Dr. F. PARKES WEBER understood that this patient had had epileptic attacks, besides being mentally backward. That suggested the bare possibility that she might have the very rare condition known as tuberous (or so-called tuberose) sclerosis of the brain, as well as Adenoma sebaceum of the face. In every case of tuberous sclerosis of the brain there had been Adenoma sebaceum present likewise, he believed. He supposed that tuberous sclerosis was to be regarded as a condition in the brain of congenital or "developmental" origin, analogous to the fibrous thickening in the skin, which was present over the lower part of the back in Dr. Graham Little's patient.

Dr. GRAHAM LITTLE (in reply) said this patient had not had any fits since her fourth year. The opinion as to the disease being rare in well-to-do people was sound. He had not seen a case in private practice. He had told the patient's people that the only method of treatment was to attack each tumour separately, and as that was a tedious process, he did not propose to treat it at all.

Dr. S. E. DORE showed two cases of *Morphæa guttata*. These two young women presented the same type of morphœa, known as the guttate type or "white spot disease." In the first patient, aged 21 years, the lesions first appeared when she was aged 3 years, immediately after an attack of measles, and had gradually increased in number since that time. There were now numerous small, well defined, more or less circular, chalky-white or silvery macules and atrophic patches, varying in shape and size, scattered about the clavicular, sternal, and posterior scapular regions. The small white spots were comparatively few in number, and for the most part situated about the clavicles. At the lower end of the sternum there was a small group of pea-sized atrophic, smooth depressed areas without the peculiar snow-white appearance, and over both scapulæ posteriorly there were a few chalky spots, but most of the lesions consisted of oval macules, larger than those on the chest, and having a somewhat linear arrangement from above downwards, looking as if they had been produced by excoriations with the finger-nails. One or two of the lesions on the back were covered by a crust, which appeared to represent an intermediate stage between the first white morphœic and the final atrophic stage. The evolution of the lesions was evidently extremely slow and could not be traced by the patient.

In the second case, a woman, aged 35 years, the lesions had only been present a year, and were much fewer in number. They took the form of a largish patch above the left clavicle, evidently due to the coalescence of small macules, several macules at the sternal end of the clavicle and a collection of small, rather more scattered, spots on

the back of the neck. The macules in this case had the same sort of "mother-of-pearl" appearance, but not so well marked, and they seemed to be more superficial, lacking the appearance of being let into the skin as in the other patient. None of them showed atrophy or crust formation.

The name "white spot disease" had been applied to more than one disease, and the first case showed how easily idiopathic macular atrophy might be confused with the atrophic stage of guttate morphœa. The term had also been used for some cases of Lichen planus sclerosus, but Montgomery and Ormsby, from an analysis of the published cases, pointed out that the term was correctly applied only to the guttate variety of morphœa. The distribution in his cases about the clavicular and sternal regions and the back of the neck was very characteristic, but in 1904 Dr. MacLeod showed a case in which the lesions were situated on the abdomen. A point of interest and possibly of importance in the history of his two cases was the fact that both suffered from measles, and in one the attack directly followed that disease. In looking up the recorded cases he noticed that nearly all the patients had a history of measles, and in some a severe attack was mentioned, although no special stress was laid upon it by the observers. It seemed to him possible that the eruption of measles might be a predisposing factor.

The CHAIRMAN said that some of the lesions appeared to be aggravated by secondary microbial invasion. The general conditions might be treated with advantage by the continuous galvanic current.

Major GRAY noted that one of the patches in Dr. Dore's first case had a definite hæmorrhage in it; he did not know whether that had been commonly noted in the guttate type of sclerodermia. Some years ago he had a patient, an old lady, aged about 80 years, with very numerous patches of this type of sclerodermia on the chest and the abdomen. A large number of the lesions had hæmorrhages in them, and they were scaling very profusely.

Dr. DORE (in reply) said he did not regard the formation of scales or crusts in the first case as due to an infection by organisms, but to a stage of the disease leading to atrophy. He had tried X-ray treatment in ordinary morphœa but without much success, and there was a danger in continuing the treatment too long. He would try to obtain a section, but he would like to point out that Montgomery and Ormsby worked out the histology of their cases and found it to be that of ordinary morphœa.

CURRENT LITERATURE.

INFLAMMATORY AFFECTIONS.

A NEW METHOD OF TREATMENT OF PSORIASIS BY INTRAMUSCULAR INJECTIONS OF PURE SULPHUR IN SOLUTION.
 LOUIS BORG. (*La Presse Médicale*, June 7th, 1917, p. 331.)

THE writer gives as the formulae employed: (1) Sulphur precip. pur., 20 centigr.: oil of sesame (or liquid paraffin), 100 c.cm.; or (2) sulphur precip. pur., 20 centigr.: eucalyptol, 20 c.cm.; oil of sesame 80 c.cm. The dose is 5 c.cm. (*i. e.* 1 centigr. of sulphur) injected deeply into the gluteal muscles. A small number of cases only (5) have been treated, but the results have been very encouraging. One case was cured by one injection, one by four injections, a third improving after eight injections, and two still under treatment.

H. G. A.

A FURTHER CONTRIBUTION TO THE STUDY OF THE ÆTIOLOGY OF PEMPHIGUS CHRONICUS. FRANCESCO RADAELI.
 (*Giorn. Ital. d. Mal. Ven. e della Pelle*, 1917, fasc. v, p. 332.)

IN 1906 the author published two cases of Pemphigus chronicus from which, after death, he obtained cultures of an organism from the bone marrow. In 1909 he succeeded in cultivating the same organism from three other cases who died of pemphigus. In these cases the organism was grown from the bone marrow, heart-blood, liver, and spleen. In some of the cases the culture was obtained pure, in others combined with other organisms. The organism is a bacillus, in length 1.5-2 μ , with rounded and swollen ends giving the appearance of a diplococcus. It grows as isolated organisms or in chains. It is Gram-negative and a facultative anaerobe, and grows on all the ordinary media. The cultures give off the odour of burnt glue and are white and later greyish-white in colour. It liquefies gelatin and produces alkali and on glucose agar develops gas. Inoculated subcutaneously, intravenously, or intra-peritoneally in rabbits, guinea-pigs, mice, and dogs, this organism caused death in 18-72 hours. In a rhesus monkey the intravenous injection of this organism produced a widespread eruption of vesicular and bullous lesions with sero-purulent contents. Cultures from these lesions showed only staphylococci. In human beings suffering from pemphigus the author has not succeeded till this year in cultivating the organism from the skin lesions or blood during life. In some cases the serum of pemphigus cases agglutinated this organism, but only with a minimum dilution of 1 in 50. In one case the serum deviated complement.

Copelli has also isolated an identical organism from several cases of pemphigus. In one case he obtained the organism from the circulating blood and in another from the circulating blood and skin eruption. He also confirmed Radaeli's work by inoculating rabbits and guinea-pigs, and produced a bullous eruption by inoculating a monkey. In this article under consideration Radaeli reports a case of pemphigus, from whose blood he obtained during life a pure culture of his organism. He therefore claims that his bacillus is the cause of Pemphigus vulgaris, and possibly also of Pemphigus vegetans.

R. C. L.

A CASE OF GONORRHOEAL KERATOSIS. Capt. W. H. BROWN and
Capt. A. M. DAVIDSON (*Brit. Med. Journ.*, October 6th, 1917, p. 453.)

THIS is an account of the sixth case* of gonorrhoeal keratosis recorded in this country. The patient, a regular soldier, aged 25 years, contracted gonorrhoea early in 1914 and was treated with irrigations. After four months' treatment he was back on duty and well. He exposed himself to infection again and was admitted to hospital in France on the fifth day of his second attack—May 18th, 1916. On admission his temperature was 102° F., and he had acute gonorrhoeal arthritis of the right ankle and great toe and a muco-purulent urethral discharge. The prostate was hard and the right lobe nodular, both seminal vesicles were also indurated and readily palpated. Four days after admission the right wrist became acutely painful and swollen, and nine days after admission acute arthritis of the left knee developed and had to be tapped. No gonococci were found in the fluid from the joint but pus cells were present. He was treated with urethral irrigations and mixed gonococcus and staphylococcus vaccines. Local treatment consisted of radiant heat and massage to the joints, and at the end of ten weeks he had recovered. The cutaneous lesions were noticed three days after admission as peculiar small nodules on the right foot which was greatly swollen. Under treatment the swelling of the ankle and foot subsided, but the skin lesions gradually became more numerous and extended to the left foot. The eruption was discrete and consisted of very small, hard, conical nodules or crusts, varying in size from a large pin-head to a pea.

The smallest lesions were more or less conical in shape with a firm horny feel, giving the impression of being just under the epidermis, which remained intact over the small cone, and normal in colour. From this stage to that of the largest lesions there were all grades. As the lesions increased in size the epidermis over the cone became whitish and gradually gave way at the apex, exposing a small, hard, brownish crust in colour and consistence like beeswax. When the epidermis had completely given way a loose fringe of epithelium encircled the underlying hard cone, and the cone itself could be easily picked out from the underlying Malpighian layer, leaving a smooth pinkish area on which the base of the crust had been attached. The parts affected were chiefly the soles and borders of the feet. There was a small group of lesions on the dorsum of the right foot and some on the dorsal and plantar surfaces of the toes; there were none on the hands or on any other part of the body. As the patient improved the crusts gradually fell off and the skin returned to its normal condition. No growth resulted from cultures taken from under the crusts. No initial erythema or telangiectasis was observed, as described by Williams in his case, and there was no inflammatory areola in any of the lesions. The lesions were practically all discrete and there was no generalised plantar keratosis.

A notable feature in all the recorded cases is the simultaneous presence of gonorrhoeal arthritis, and in most cases there had been a previous attack of gonorrhoea.

* In Dr. Graham Little's paper on "Keratoderma Blenorragia" in the *Practitioner*, December, 1916, six of a total of thirty-eight cases tabulated (with an additional unrecorded case of the author's) occurred in this country. Another case was reported by Capt. W. H. Brown and Capt. H. Hargreaves in the *Brit. Journ. Derm.*, April-June, 1917, p. 107.

Another notable feature is the rapid improvement of the skin lesions with the general progress of the patient. In none of the cases described has the gonococcus been found in the fluid aspirated from the joints.

S. E. D.

CONTRIBUTION TO THE STUDY OF RAT-BITE FEVER. LEONARDO MARTINOTTI. (*Giorn. Ital. de Mal. Ven. e della Pelle*, 1917, fasc. ii, p. 116.)

THIS article reports one case of rat-bite fever, and gives a full account of what is known at present about the disease and its aetiology. In the case referred to the patient was a woman who was bitten on the finger by a sewer rat. The bite caused only slight pain, and was treated at hospital with local antiseptics, and healed in about six days. On the seventh day a swelling was noticed at the seat of the bite. The whole finger rapidly became swollen and painful. There was also slight fever. With antiseptic treatment the swelling diminished after a week, but a small red swelling appeared on outer side of right forearm. This was rapidly followed by several other similar red, raised, rather indefinitely outlined swellings on the forearm and lower part of upper arm. These felt slightly infiltrated, and were surrounded by a diffuse area of œdema. All the lesions were painful and tender to touch, and looked rather like the lesions of Erythema nodosum. The axillary glands were painful and swollen. The patient was treated with two injections of neosalvarsan at intervals of a week, and both the fever and the swellings disappeared rapidly. One of the lesions was excised and examined microscopically. Except for the presence of a few wandering cells, the epithelium was unchanged. There was a diffuse infiltration in the cutis vera and subcutaneous tissues, and in the latter the infiltration occurred almost exclusively in the lobules of fatty tissue. The infiltration consisted of lymphocytes, plasma cells, epithelioid cells, young connective-tissue cells, and polynuclear leucocytes. The infiltration was most marked around the blood-vessels, glands of the skin, and in the fat. In the infiltrate numerous small ovoid or bacillary forms were seen, but the author is not prepared to affirm definitely that these were organisms. The author details the experimental work done in this disease, and shows that up till now, although several organisms have been described, there is none which can be definitely proved to be the causal organism. Illustrations of the appearance of the skin lesions and microscopic sections are also given.

R. C. L.

TUBERCULOSIS.

NOTES ON THE CAMPAIGN AGAINST LUPUS VULGARIS.

LUIGI PHILIPPSON. (*Giorn. Ital. d. Mal. Ven. e della Pelle*, 1916, fasc. v, p. 282.)

THIS article treats in general terms the history of the attempts at organised treatment of lupus since Finsen's time. It is more a review of the position than an attempt to suggest new lines of progress.

The percentages of cures obtained by different men are given and also the age incidence of the disease in different countries. The general impression left is that we are still a long way from understanding the principles which underlie the modes of infection and from a satisfactory solution of its treatment.

R. C. L.

SYPHILIS.

CLINICAL.

REINFECTION IN SYPHILIS, WITH OBSERVATIONS ON TWENTY-EIGHT CASES. CHARLES F. WHITE, Major, R.A.M.C. (*Brit. Med. Journ.*, October 20th, 1917, p. 503.)

WITH the older treatment of syphilis a complete cure was difficult or very rare, and consequently cases of reinfection were so exceptional that a doubt of their existence was not unreasonable. The collection and examination of instances of reinfection are therefore of great importance, first, as showing beyond doubt that reinfection is a fact, and secondly, as amounting to almost complete proof of the cure of the first attack. Since the introduction of the combined salvarsan and mercury treatment for syphilis the number of cases of genuine reinfections reported has increased, a sure sign of the curative efficacy of this treatment and a proof that one attack of syphilis does not produce immunity. Formerly proof of reinfection was based on clinical evidence alone, and was open to certain fallacies, viz. in a first attack, absence of positive proof that the chancre was syphilitic and not a soft sore; in a second attack, that it was not a soft chancre, a chancreiform gumma, a pseudo-chancre, *i. e.* a mucous genital syphilide which may have undergone induration, or that a recurrent rash was not put down as a fresh secondary syphilide and regarded as proof of a second attack. In the first attack if *Spirochaeta pallida* is found and the blood gives a positive Wassermann reaction, and in the second attack the spirochete is found in the new chancre which appeared at a different site from the first chancre and the blood gives a negative reaction (implying that the patient was seen before the blood had had time to become positive), there is very strong confirmatory evidence, apart from clinical observation and opinion, that reinfection has taken place. The writer gives notes of two series of cases of reinfection.

In the first series of nine patients which were seen and treated by him during both attacks, the conditions enumerated above were fulfilled; in the second series of eighteen cases these stringent conditions were not fulfilled, *e. g.* the patient was not seen in his second attack until the Wassermann reaction had become positive or until secondary symptoms had appeared, and in such cases of probably genuine reinfection the correctness of the diagnosis must depend upon the accuracy of the observation and the extent of the special experience of the practitioner.

S. E. D.

DENTAL STIGMATA IN HEREDITARY SYPHILIS: THE VALUE OF THE FIFTH CUSP. M. MOZER and CH. CHENET. (*La Presse Médicale*, September 29th, 1917, No. 52, p. 541.)

RESEARCHES undertaken primarily with the idea of confirming the interesting conclusions of Sabouraud showed eventually that the fifth cusp does not appear to have, from the point of view of syphilis, the interest which Sabouraud attributes to it. Mozer and Chenet examined the teeth of 60 children under treatment for hereditary syphilitic complaints, and of 1400 children and women, tuberculous or rachitic, in the Marine Hospital, etc. Among the 60 children with hereditary syphilis only 1 presented molars with a fifth cusp, while 4 were found to have Hutchinson teeth. Of the 1400 other patients 19 showed well-marked fifth cusps.

and each of these gave a negative Wassermann reaction even after a provocative injection of mercury and neo-salvarsan. They conclude that these clinical facts, verified by laboratory tests, show this new sign of hereditary syphilis, which Sabouraud regards as equal in importance to Hutchinson's teeth, does not really present such value.

H. G. A.

VITILIGO AND SYPHILIS. CARLO VIGNOLO-LUTATI. (*Giorn. Ital. d. Mal. Ven. e della Pelle*, 1916, fasc. vi, p. 317.)

IN an article of thirty-four pages the author discusses the question of the origin of vitiligo. He quotes five cases in which there was syphilis acquired or hereditary, and gives photographs of the lesions. He comes to the conclusion that further research on the subject is necessary and that so far as is known at present vitiligo may be the result of different processes and cannot be definitely associated with syphilis.

R. C. L.

ON A DENTAL SIGN OF HEREDITARY SYPHILIS. R. SABOURAUD. (*La Presse Médicale*, March 22nd, 1917, No. 17, p. 169.)

HEREDITARY SYPHILIS WHICH IS OVERLOOKED. R. SABOURAUD. (*La Presse Médicale*, May 17th, 1917, No. 27, p. 273.)

PELADE AND DENTAL TERATOLOGY. R. SABOURAUD. (*La Presse Médicale*, August 23rd, 1917, No. 47, p. 483.)

SABOURAUD maintains that many cases of hereditary syphilis show no sign beyond defects of dentition—defects which, in spite of the now twenty-five years old teaching of Fournier, are not yet, he says, sufficiently well known. He thinks it hardly conceivable that the teeth in these cases can have suffered without some imprint of the disease upon the viscera, nervous system, or bony structures, and he believes that such imprint does occur, and that it renders the offspring of syphilitic parents more predisposed to attacks from other diseases, such as eczema, psoriasis, and Alopecia areata, as regards the skin, and to tuberculosis, enteritis, and probably other diseases of internal organs.

Besides malformation of jaws, irregularities of position of the teeth, and partial or complete absence of teeth, the chief deformities are: Hutchinson's teeth with the lunar crescentic notch, of the first, or, more often, of the second dentition—a characteristic, but rare deformity; the more frequent horizontally striated or pitted canines; and the screw-driver-shaped incisors, with rocky molars.

To these Sabouraud now adds another deformity, which he regards as characteristic, and which he was led to notice while studying the relationships of severe Alopecia areata with syphilis. This sign is the presence on the internal face of the anterior upper molars of both sides of a mamillary protuberance,* more or less raised, and which is really a rudimentary, supplementary cusp. It is always the anterior cusp of the molar which is doubled. Sometimes the mamillary protuberance is long enough to be felt projecting on the biting surface of the

* [Dr. Sabouraud publishes a letter from Mons. A. Drancé, who points out that this fifth tubercle is well known to dental surgeons under the name of the "tubercle of Carabelli," but without any supposition that it is of syphilitic nature.]

tooth. It is a very frequent sign, and often exists alone, without other dental deformities, as the sole demonstrable stigma of hereditary syphilis.

In regard to severe Alopecia areata, it is not to be supposed that all such cases are of syphilitic origin, but it can be demonstrated that many present at the same time one or other of these dental deformities, together with a positive Wassermann reaction.

It is a sign which may be found in 30 out of every 100 or 125 out-patients at a hospital clinic, and he has not yet met with an example in which the patient's blood-serum failed to give a positive Wassermann reaction. H. G. A.

NOGUCHI'S REACTION IN SYPHILIS. GIACOMO DEFINE. (*Giorn. Ital. d. Mal. Ven. e della Pelle*, 1916, fasc. vi, p. 352.)

DEFINE used Noguchi's preparation of "luetin" and applied it by intradermic injection. He diluted the luetin with an equal quantity of sterile artificial serum, giving 0.07 for an adult and 0.05 for a child. He tried the reaction in thirty cases and in each case the Wassermann reaction was also done. Six non-syphilitic cases were also treated similarly as controls.

In three cases of primary syphilis luetin reaction was negative in two and positive in one, whilst the Wassermann was positive in two and negative in one.

In ten cases of secondary syphilis luetin reaction was negative in six and positive in four, whilst the Wassermann was negative in two and positive in eight; in four cases of latent syphilis (without treatment) luetin reaction was positive in all, whilst the Wassermann was positive in two and negative in two. In six cases of late syphilis luetin reaction was negative in two and positive in the rest, whilst the Wassermann was negative in two, doubtful in one, and positive in the other.

In five cases of congenital syphilis luetin reaction was positive in all and the Wassermann negative in all except one, and in a case of progressive paralysis luetin reaction was positive and the Wassermann negative. All the six control cases were negative to both reactions.

R. C. L.

THERAPEUTICS.

MERCURIAL STOMATITIS; ITS PATHOGENY; ITS PROPHYLAXIS; ITS TREATMENT. M. FAVRE. (*Lyon Medical*, August, 1917, No. 8, p. 349.)

It is a mistake to suppose that mercurial stomatitis is a morbid entity, that it is the result of a specific action of the mercury. It is in reality clinically and bacteriologically identical with simple stomatitis. The mercury is merely a predisposing factor which provokes a vascular congestion which revives the activity of the buccal spirilli to which the stomatitis is due. Mercurial stomatitis may be prevented or rapidly cured by certain drugs which are fatal to the spirilli, and one of the advantages of the combined arseno-mercurial treatment of syphilis is that the intravenous injected arsenic acts as a check on the growth of buccal spirilli, so that patients so treated seldom get severe stomatitis. In a developed mercurial stomatitis a cure may be rapidly brought about by the local action of spirillicides, particularly by silver nitrate. To quickly cure a mercurial stoma-

titis the affected parts should be thoroughly mopped with a 1 per cent. solution of silver nitrate by means of a swab on a match-stick. This should be carefully done by the medical man and repeated daily with a 1 in 15 or a 1 in 20 solution. Immediately after the mopping the gums should be freely swabbed with a 1 per cent. solution of methylene blue and a mouth wash of potassium chlorate used by the patient. In this way the stomatitis may be cured without the need of intercepting for any length of time an intensive mercurial treatment.

H. G. A.

THE ASSOCIATION OF SULPHUR WITH MERCURY IN THE TREATMENT OF SYPHILIS. M. LOEFER, A. BERGERON, and K. VAHRAM. (*Le Progrès Médical*, January 27th, 1917, No. 4, p. 29.)

THE association of sulphur with mercury appears to render real service in divers manifestations of syphilis. Sulphur alone has no action on syphilis and should be used parallel with mercurial medication. Certain authors have injected sulphurous waters: others, with McDonagh and Darier, have used a new product—intrammine. The authors have preferred colloidal sulphur, of which they have had long experience, and have employed sometimes intravenous or intra-muscular injections of colloidal sulphur and of biniodide or of cyanide of mercury, sometimes injecting in one solution colloidal sulphur and colloidal mercury.

The sulphur is devoid of all irritant action on the glandular parenchymas. The diminution of the phenomena of mercurial saturation testifies, on the other hand, to a valuable increase of tolerance in certain subjects towards increased doses of mercury.

Certain syphilitic lesions are generally more rapidly resolved than by mercurial compounds alone, and this is particularly marked in rebellious mucous lesions, corneal lesions, leucoplakias, and syphilitic arteritis, and, above all, in renal lesions which badly support mercury or arsenic.

The efficacy of the combined treatment is demonstrated, too, by the fact that the Wassermann reaction becomes attenuated and disappears in most cases while the mucous and visceral lesions are retrogressing.

H. G. A.

ON THE COMPOSITION OF THE URINE AFTER INTRAVENOUS INJECTION OF SALVARSAN. CESARE CAVINA. (*Giorn. Ital. d. Mal. Ven. e della Pelle*, 1917, fasc. iv, p. 262.)

ON an analysis of fifty cases the author finds that the injection of salvarsan in therapeutic doses does not produce important modifications in the principal physical and chemical characters of the urine. It only very rarely produces albumen, blood, and casts, but very frequently, almost constantly, causes a fair y intense urobilinuria. Haematoporphyrinuria is also frequent

R. C. L.

HÆMATOPORPHYRINURIA FROM SALVARSAN. CESARE CAVINA. (*Giorn. Ital. d. Mal. Ven. e della Pelle*, 1917, fasc. v, p. 315.)

CAVINA finds that in about 40 per cent. of cases haematoporphyrin appears in the urine after injection of salvarsan. It seems to depend on an abnormal destruction of hæmoglobin which the liver cannot deal with, and which consequently is eliminated by the kidneys.

R. C. L.

"VAMIANINE" IN THE TREATMENT OF SYPHILIS. GRAYAGNA.
(*Giorn. Ital. d. Mal. Ven. e della Pelle*, 1916, fasc. i, p. 49.)

VAMIANINE is a preparation made by Chatelain containing gold, silver, and a small quantity of iodine. It also contains guaiac, sarsaparilla, and an extract of corydalis formosa. The preparation is made up in the form of an elegant sweetmeat, so that no one can tell that a drug is being taken. In the cases treated by the author with this preparation he obtained practically no result whatsoever, and all cases were rapidly cured with the usual antisyphilitic methods.

R. C. L.

FUNGUS AFFECTIONS.

CONTRIBUTION TO THE STUDY OF TINEA UNGUIUM FAMILIALIS. CARLO VIGNOLO-LUTATI. (*Giorn. Ital. d. Mal. Ven. e della Pelle*, 1917, fasc. i, p. 54.)

THE author describes five cases of ringworm of the nails. Two were in sisters and another in a woman who worked with these sisters. The other two were in a lady and her mother-in-law. They all showed typical clinical lesions. In the one set of cases the fungus was found by culture to be *tr. effractum*, and in the other set *tr. plicatile*. Photographs of the fingers and the cultures are given. Reference is also made to practically all the published cases of ringworm of the nails, and a complete bibliography is given.

R. C. L.

QUARTERLY SURVEY OF DERMATOLOGICAL LITERATURE.

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Artificially Produced Eruptions (les éruptions provoquées) (illustrated). MILIAN.
(*Paris Médical*, May 5th, 1917, vol. vii, No. 18, p. 343.)

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Cutaneous Diseases, Relation of Fruit Ingestion to. ANSTRUTHER DAVIDSON.
(*Journ. of Cut. Dis.*, October, 1917, vol. xxv, No. 8, p. 665.)

Dermographism in Diagnosis. L. SCHWARTZ. (*Korrespondenz-Blatt f. Schweizer Aerzte*, June 30th, 1917, vol. xlvii, No. 26, p. 817.)

Dermatosis Artefacta, Eczematiform and Psoriasiform, A Case of. R. RIVALTA.
(*Giorn. Ital. d. Mal. Ven. et della Pelle*, October 7th, 1917, vol. lviii, fasc. iii, p. 282.)

Dermatitis Factitia and Neurotic Gangrene. C. A. SIMPSON. (*Journ. of Cut. Dis.*, August, 1917, vol. xxxv, p. 494.)

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- Eczema**, A Study of the Nitrogen Metabolism of Two Cases of. J. F. SCHAMBERG and G. W. RAIZISS. (*Journ. of Cut. Dis.*, March, 1917, vol. xxxv, p. 135.)
- Epidermolysis Bullosa**, Considerations on. A. RAVOGLI. (*Journ. Amer. Med. Assoc.*, July 28th, 1917, vol. lxix, p. 256.)
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- Erysipelas or Chronic Joint Rheumatism**, The Kollargol Treatment of. EBERSTADT. (*Munch. Med. Wochenschr.*, August 28th, 1917, vol. lxiv, No. 35, p. 1152.)
- Erythema Figuratum Perstans**. W. H. MOOK. (*Journ. of Cut. Dis.*, October, 1917, vol. xxv, No. 8, p. 635.)
- Erythema Group**, Visceral Disturbances in Patients with Cutaneous Lesions of the. H. A. CHRISTIAN. (*Journ. Amer. Med. Assoc.*, August 4th, 1917, vol. lxix, p. 325.)
- Essential Shrinking of the Conjunctiva in Acute and Chronic Pemphigus**, Two Cases. (Bibliography.) F. A. CONLON. (*Boston Med. and Surg. Journ.*, August 16th, 1917, vol. clxxvii, p. 206.)
- Exanthema**, Follicular, Acneiform, in the Army (illustrated). FRANZ VERESS. (*Derm. Wochenschr.*, August 4th, 1917, Bd. lxxv, No. 31, p. 727.)
- Exostoses**, or Gonorrheal Spurs of the Os Calcis. E. P. MERRITT. (*Journ. Amer. Med. Assoc.*, July 14th, 1917, vol. lxix, p. 118.)
- Frontier Sores and their Treatment by Antimony Injections**. L. BODLEY SCOTT. (*Indian Med. Gazette*, July, 1917, vol. lxii, No. 7, p. 231.)
- Gangrene of Penis and Scrotum**, On Spontaneous (illustrated). J. KYRLE. (*Berlin Klin. Wochenschr.*, January 8th, 1917, No. 2, p. 37.)
- Gangrenous Vaccinia**, Localised. A. J. CHALMERS and R. G. ARCHIBALD. (*Journ. of Trop. Med. and Hyg.*, October, 1917, vol. xx, No. 19, p. 217.)
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- Lupus Erythematosus and its Management.** Practical Observations on. F. WISE. (*Journ. of Cut. Dis.*, August, 1917, vol. xxxv, p. 500.)
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- Paludian Erythema.** DE BRUN. (*Paris Médical*, August 11th, 1917, vol. vii, No. 32, p. 129.)
- Pemphigus Epidemic not confined to Newborn Babies and its Relation to Measles,** A. ADOLF HEINMÜLLER. (*Monats. f. Kinderheilk.*, No. 1, 1916, vol. xlv, p. 7.)
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- Sporotrichosis.** J. H. BLAISDELL. (*Journ. of Cut. Dis.*, August, 1917, vol. xxxv, p. 452.)
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SYPHILIS.

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- Treatment of Syphilis.** On the Achievements of the Consultation Centres and the Results of Present-day. W. SCHOLTZ. (*Münch. med. Wochenschr.*, September 11th, 1917, vol. lxiv, No. 37, p. 1200.)
- Urine After Intravenous Injection of Salvarsan.** C. CAVINA. (*Giorn. Ital. de Mal. Ven. e della Pelle*, October 7th, 1917, vol. lviii, fasc. iv, p. 263.)
- "Yamianine" in the Cure of Syphilis.** GRAVAGNA. (*Giorn. Ital. de Mal. Ven. e della Pelle*, April 20th, 1917, vol. lvii, fasc. i, p. 49.)
- Wassermann Reaction, Conclusions Drawn from a Comparative Study of Different Methods of Performing the.** J. BRONFEIBRENNER and M. J. SCHLESINGER. (*New York Med. Journ.*, September 15th, 1917, p. 489.)
- Wassermann Reaction and Pulmonary Tuberculosis, The.** JAMES. S. FORD. (*Med. Record*, October 20th, 1917, p. 678.)

REVIEWS.

DISEASES OF THE SKIN.*

IN welcoming the sixth edition of this well-known text-book it may be remarked that it has arrived at a state of popularity, rendering it somewhat independent of the reviewer's petty criticisms. Nevertheless, it may be of interest to comment on some of the changes that have occurred since its last appearance six years ago.

In spite of somewhat considerable changes and a good deal of new knowledge, although, as the author says, "no epoch-making advance has been made," the book has been kept almost to its old size—770 pages against 762 of the fifth edition. This has been managed by printing some of the rarer diseases in small type, so that the more junior student may omit these at first, and yet have them at his command when an account of them may be desirable.

There are still some definitions which might perhaps be altered with advantage in the next edition. For instance, a papule is stated to be a solid elevation not larger than a pea, and a nodule a similar elevation larger than a papule but smaller than a tumour. The author admits that this is only a rule-of-thumb definition, and says that nodules, as in tertiary syphilis and leprosy, may be smaller than a pea. Is it not really the case that by a papule we all mean an elevation occurring chiefly in the epidermis and pars papillaris, and by a nodule a solid lesion of more or less spherical shape *deeply* embedded in the true skin or beneath it? This, it appears to me, is the true reason why we call the large, early lesions of syphilis papules and the smaller, later ones nodules.

Again, no mention is made under vesicles of that form which, as in impetigo, develops by the accumulation of fluid between the horny and mucous layers of the epidermis, only the parenchymatous and interstitial forms being described.

* *Diseases of the Skin: An Outline of the Principles and Practice of Dermatology.* By Sir MALCOLM MORRIS, K.C.V.O. Sixth edition. Revised by the Author with the assistance of S. E. DORE, M.D.Cantab., M.R.C.P. London: Cassell and Co., Ltd., 1917. Pp. xv and 770: 10 coloured, 72 black and white plates. Price 12s. net.

It is refreshing to find the author on p. 25 stating that colour is always a most valuable guide. A great deal of nonsense has been talked about colour in skin diseases, and years ago we were taught that colour must be ruled out as deceptive in making a diagnosis; yet I am convinced that the author is right and that we are all greatly influenced by it in coming to a conclusion, and one has only to think of the increased difficulty in making a diagnosis in the negro to become aware of the fact.

It is a pity, in my opinion, that the author continues to uphold the opinion that sebaceous material ever forms a scale. Thus, in the chapter on diagnosis he says: "In Lupus erythematosus there are often crusts that resemble scales; they are not, however, formed by the drying up of pustules, but by sebaceous matter"; on p. 128, "The skin is usually covered with small, adherent scales of sebum"; and on p. 599 he still maintains the "Hebraic" division into *Seborrhœa sicca* and *Seborrhœa oleosa*. Whereas it has been shown repeatedly by Sabouraud and others that these so-called dry, sebaceous scales are really nothing more nor less than the exfoliation of abnormal horny cells (*stratum corneum*). These are, no doubt, matters of small importance, but in so excellent a book one is perhaps unduly irritated to find still flourishing errors that should have been decently interred long ago.

Under the heading of "Scabies of Animal Origin" I was disappointed to find that most of the paragraph is devoted to Norwegian itch, though mention is just made of "rarer forms of scabies of animal origin, derived, not improbably, from domestic and tame animals. . . ." Now, Norwegian itch is, to say the least of it, a rare disease in this country, whereas cases of sarcoptic mange—*i. e.* scabies of the dog—are quite common and almost characteristic enough to allow of a confident diagnosis, so that a short description would, I think, have been valuable.

The opinion of the author on salvarsan and its congeners and of mercury is naturally of interest, and I note with satisfaction the unprejudiced way in which he advises both, refusing to be carried away by the glamour of the newer preparations, yet recognising their undoubted value in aiding the cure. It is pleasant also to find the old oral administration of mercury still supported for suitable cases by so experienced an observer.

Enough has perhaps been written to show the wide scope of the book and the mature judgment exhibited in it. That it is a reliable and well-written guide is obvious to anyone acquainted with the subject, and now in its more complete form it may fairly claim to be the representative British text-book on Dermatology.

The author and his collaborator are to be heartily congratulated on their survey.

A. W.

A TREATISE ON DISEASES OF THE SKIN FOR ADVANCED STUDENTS AND PRACTITIONERS.*

Dr. STELWAGON's well-known book, although written particularly for the use of those engaged in general practice, forms a valuable work of reference for the

* *A Treatise on Diseases of the Skin for Advanced Students and Practitioners*. By HENRY W. STELWAGON. Eighth edition, revised. 356 text-illustrations, and 33 coloured and half-tone plates. Philadelphia and London: W. B. Saunders Company. 1916.

specialist in dermatology, particularly on account of its very complete and up-to-date bibliographies. The author is not content to give merely a list of references, but generally a short summary of the contents of the more important recent papers upon each subject dealt with, and frequently a useful running commentary. Full justice is done to the work of writers in the English language, both American and British, and there are very numerous references to papers which have appeared in the *British Journal of Dermatology*.

The three or four hundred black-and-white illustrations, which constitute such an admirable feature of the book, have been enriched by several new examples, notably by excellent photographs of Granuloma pyogenicum, Granuloma fungoides, leprosy, multiple pigmented sarcoma, tuberculides, occupational dermatoses, and primrose dermatitis. The high quality of the photographs and the beautiful manner in which they have been reproduced justifies the author's "strong belief in the value of illustrations." The few coloured plates compare unfavourably with the black-and-white illustrations, and Plates I and XXII are especially crude in colouring. On the other hand, only one of the numerous black-and-white illustrations appears indifferent, namely, that of Pityriasis rosea, a complaint which it is so important for the practitioner to be able to recognise in order to distinguish it from a syphilide, for which it is so often mistaken. Such examples as the photographs of Ichthyosis, p. 591, Tinea versicolor, Plate XXXII, Porokeratosis, p. 601, Dermatitis venenata, p. 452, Copaiba rash, p. 475, to mention only a few, could be scarcely surpassed as life-like representations, in spite of the absence of colour.

In the present edition there are several new articles. That on Occupational Dermatoses gives a *résumé* of the chief of these eruptions, which have only in recent years begun to attract the attention they deserve, and the author very rightly refers to Prosser White's useful little book on this subject. The new article on Ulerythema Ophryogenes is a short summary of Tenzer's paper, but no reference is made to the contribution by MacLeod (Ichthyosis follicularis associated with Baldness, *Brit. Journ. Derm.*, 1909, xxi, 165), which deals very fully with these and allied cases. Purpura annularis telangiectodes is ranged alongside Angioma serpiginosum and Schamberg's progressive pigmentary disease, and it is suggested—and rightly, we think—that these three complaints are nearly allied or perhaps identical. In regard to the treatment of paraffinoma, another of the new subjects dealt with, the inquirer might look for some more definite statement as to the result of X-ray applications in these distressing cases than that X-rays may be given a trial.

Although Dr. Stelwagon's book is so up to date in many respects, the classification and arrangement of diseases is somewhat old-fashioned, for under the heading "New Growths" are found Granuloma pyogenicum, oriental sore, syphilis, Lupus vulgaris, tuberculous ulcer, scrofuloderma, Lupus erythematosus; while Lichen scrofulosorum and Erythema induratum scrofulosorum are described under "Inflammations" altogether apart from the group of tuberculosis of the skin.

The author's recommendation of the new arsenical preparations in the treatment of syphilis is only lukewarm, and it is interesting to note that he favours mercurial treatment by the mouth for from two to five years and inunctions in obstinate cases; "or if," he says, "the preliminary treatment is with one or two doses of salvarsan, followed by mercurials—the plan largely practised just at

the present time—the duration (of mercurial treatment) should be almost the same as detailed above.” No description is given of the technique of intravenous administration of salvarsan or its substitutes. Of intramuscular injections of mercury the author says that they are not entirely without risk, but the statement that “Ol. Cinerium (*i. e.* grey oil 40 per cent.) is given in weekly doses of 10 to 40 gr. (0.65–2.65), an equivalent of 5 to 20 gr. (0.33–1.33) of metallic mercury” is, of course, incorrect, for it represents ten times the recognised weekly intramuscular dose of mercury.

Many references are given to the literature of Wright's vaccine treatment, but nowhere is there any indication of enthusiasm for the treatment, an attitude which perhaps agrees with that of most dermatologists at the present time. In syphilis his results have been disappointing, in *Acne vulgaris* the treatment may be tried as an adjuvant in extreme and persistent cases, and in *furunculosis* he merely states that good results have been reported.

The treatment side of skin-diseases receives full attention, and the careful details of methods of applying the different remedies cannot fail to be of great help to the practitioner. But the number of remedies mentioned may perhaps sometimes render it difficult for him to make a choice. The list of those employed in eczema and in psoriasis, for example, is almost innumerable, while for the relief of pain in herpes no less than ten different drugs are recommended.

Stelwagon's book is probably the most comprehensive account of diseases of the skin in the English language by a single author, and Dermatology is to be congratulated on its possession and the author on its production.

H. G. A.

SYPHILIS.*

OWING to the strides which have been made in the knowledge of the nature and treatment of syphilis in the last few years, it is a little surprising that more text-books on the subject, suitable for the general practitioner, have not appeared. The English-speaking medical profession will, therefore, be grateful to Dr. Loyd Thompson for having written a handy book which presents the subject from the clinical and pathological point of view in a reasonable compass and in an attractive form, and which at the same time is absolutely up to date.

It is clear that the author's bias is towards the pathological side of the subject, and perhaps this side is a little overweighted when it is considered that the book is essentially one for the general practitioner; it is open to question whether the detailed technique of the Lange gold chloride test of the cerebro-spinal fluid and that of the titration of the amoceptor, complement, and antigen in the author's modification of the Wassermann test, work which would only be carried out by skilled pathologists with access to the original papers, might not have been omitted to allow the introduction of more detailed clinical descriptions, which in some places are distinctly sketchy.

The detailed description of the author's case of total alopecia occurring in a

* *Syphilis*. By LOYD THOMPSON, Ph.B., M.D. Pp. 415; 7 plates and 77 illustrations in text. Philadelphia and New York: Lea & Febiger. Price \$4.25.

case of syphilis is decidedly out of place for two reasons: First, because the author has chosen one of the rarest manifestations of syphilis to deal with in detail when the more frequently observed lesions are only considered in a general way; and secondly, because there is no evidence that the alopecia was of syphilitic nature in this case, the facts adduced being distinctly against this view.

In spite of the apparent overweighting of the pathological side of the work, however, the author has taken up a very sound position on the value of the various serological tests; he states, for instance, in reference to the Wassermann reaction, that it is "but one link in the chain of evidence, and must be interpreted in the light of the history and clinical findings," a view with which most syphilologists will be in hearty agreement.

In the chapter devoted to treatment, the author gives a full description of the various preparations which are in present-day use, and the technique of their administration. He is of an inventive turn of mind, and much of the apparatus devised by him is ingenious and useful: it is doubtful, however, whether the twin syringes which he recommends for intravenous injections of neo-salvarsan in concentrated solution have any advantages over the single syringe.

There is no doubt, however, that the author has produced a very useful book on a subject of every-day importance to the general practitioner, which can be heartily recommended. The publishers have maintained the high standard characteristic of American medical works. The illustrations are numerous, and with one or two exceptions, excellent.

CORRESPONDENCE.

To the Editor of the British Journal of Dermatology and Syphilis.

DEAR SIR,—I have been much interested in the remarks made by Dr. Pringle in the discussion on the treatment of scabies (*British Journal of Dermatology and Syphilis*, vol. xxix, Nos. 7-9), in which he alludes to the rarity of the first edition of *Pringle's Observations on the Diseases of the Army in Camp and Garrison*. I have a copy of this edition, published in 1752, and quite apart from the dermatological interest of the volume, which is very great, there is a note in the preface revealing manners of warfare which offer a most refreshing contrast with the embittered and savage habits of our present foes, whose bombing of hospitals on land and sea has become an everyday occurrence. The extract is as follows:

"Among the great causes of sickness and death in an Army, the Reader will little expect that I should mention those very means which are intended for its health and preservation: I would say the hospitals, on account of the bad air and other inconveniences attending them. During the late war one considerable step was made for their improvement. Till then it had been usual to remove the sick a great way from the Army; whereby many were in a manner left before they came under the care of the physicians: or what was attended with equal bad consequences, if the hospitals were nigh, they were for the greater security to be frequently shifted according to the changes of the camp. But the Earl of Stair, my late illustrious patron, being sensible of this hardship, before there was any

action in Germany proposed to the Duke de Noailles, of whose humanity he was well assured, that the hospitals on both sides should be considered as sanctuaries for the sick and mutually protected. This was readily agreed by the French General, and who on the first occasion showed a particular regard to the cartel. For when our hospital was at Feckenheim, a village upon the Maine, at a distance from the camp, and the Duke de Noailles having occasion to send a party to another village upon the opposite bank, *apprehending this might alarm the sick, sent over to acquaint them that as he knew the British Hospital was there, he meant them no harm, and had given express orders to his troops not to disturb them.* This agreement was strictly observed on both sides all that campaign."

The chivalrous incident narrated in the clause I have italicised deserves to be widely known, and forms a fitting pendant to the famous story of French courtesy at Fontenoy.

I am, etc.,

E. GRAHAM LITTLE.

BOOKS RECEIVED.

The Principles and Practice of Dermatology. By W. ALLEN PUSEY, M.D. Third edition. Fifty-four plates, 466 illustrations. New York and London: D. APPLETON & CO. Price 30s. net.

Veneral Diseases and their Prevention. By A. WINKELREID WILLIAMS, M.B., C.M., D.P.H. London: H. K. LEWIS & CO., LTD. Price 6d. net.

Transactions of the London Dermatological Society. 1917. London: JOHN BALE & SONS AND DANIELSSON, LTD. Price 2s. 6d.

Boletim da Sociedade Brasileira de Dermatologia. 1915. Price \$2.0.

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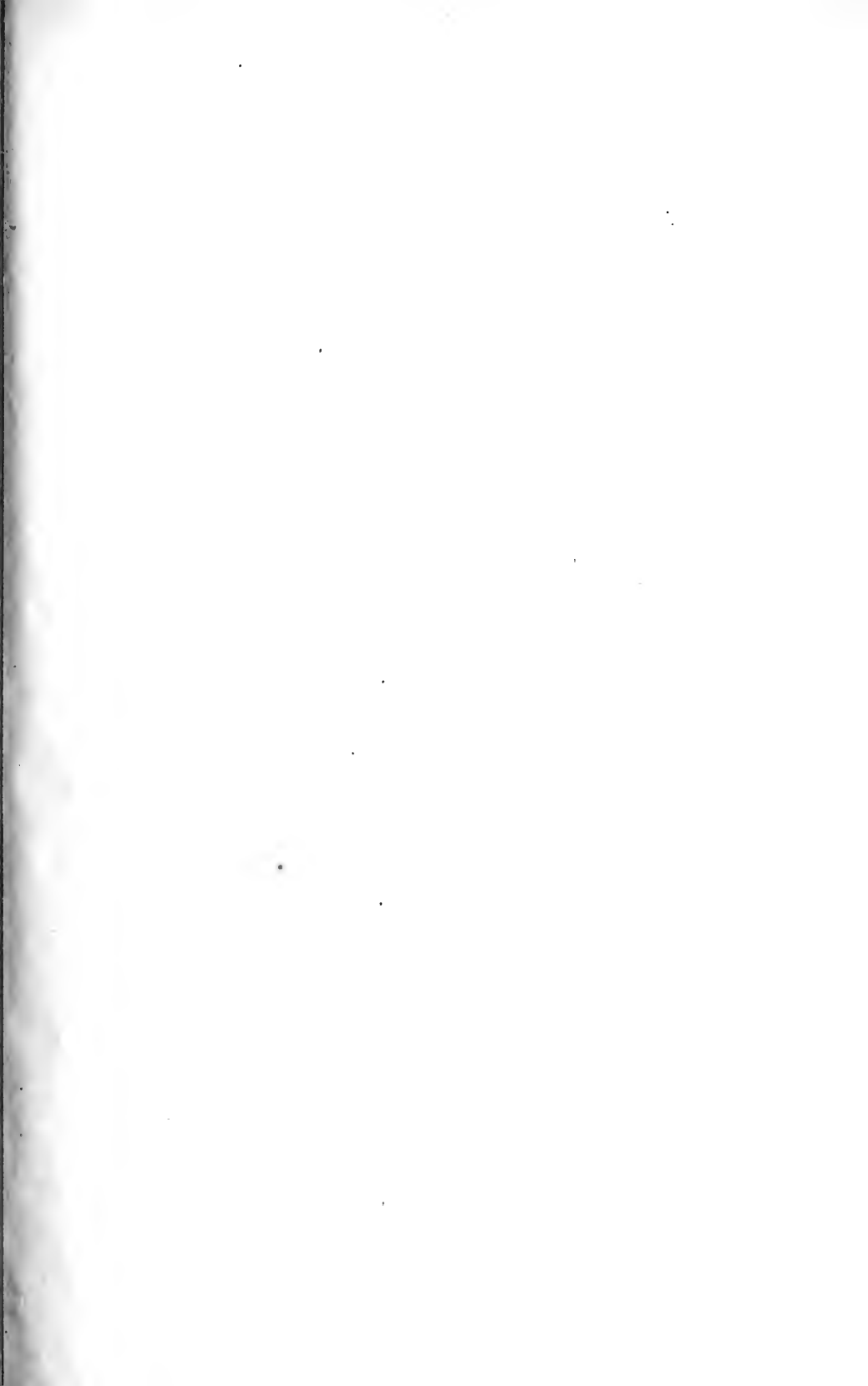
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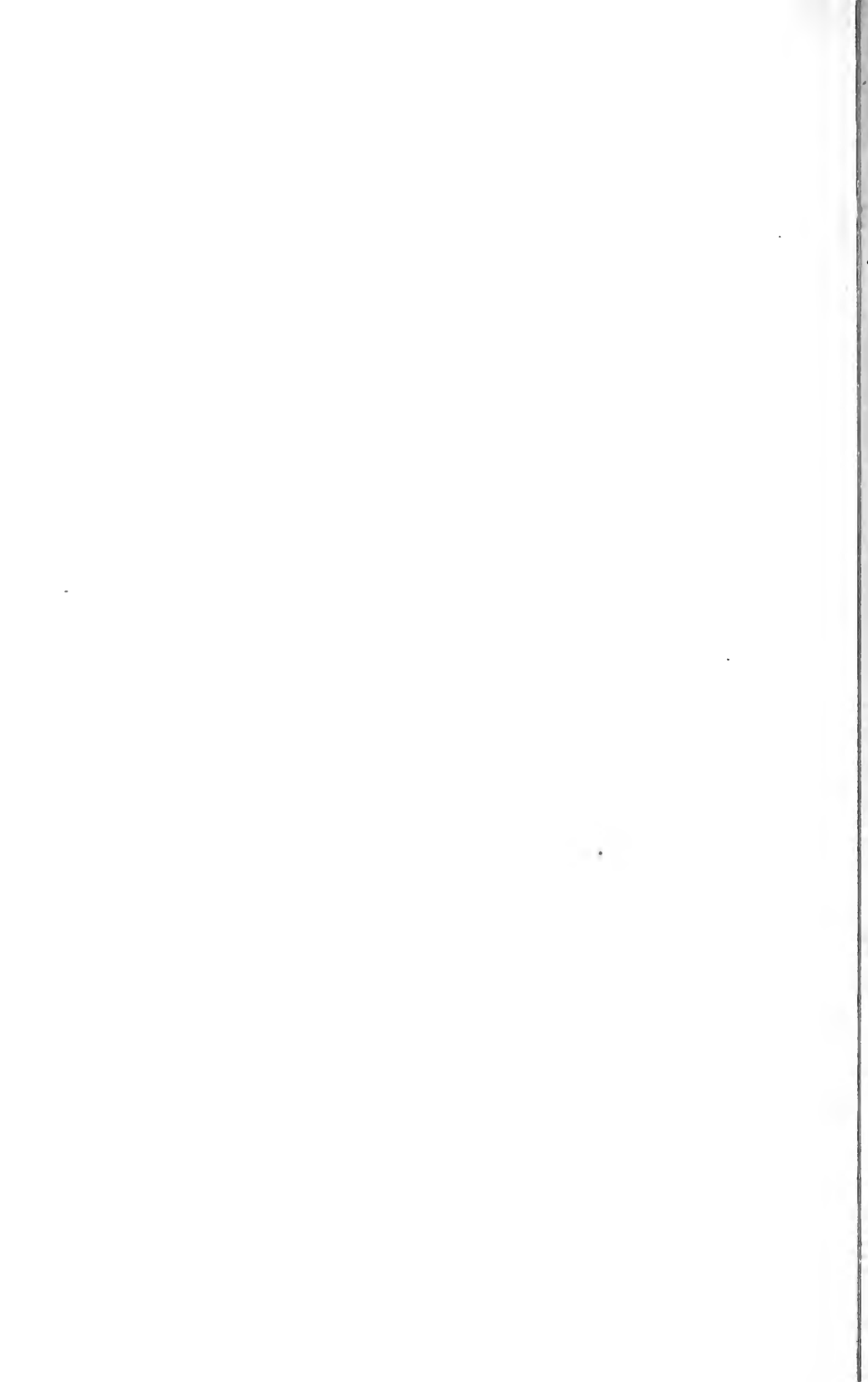
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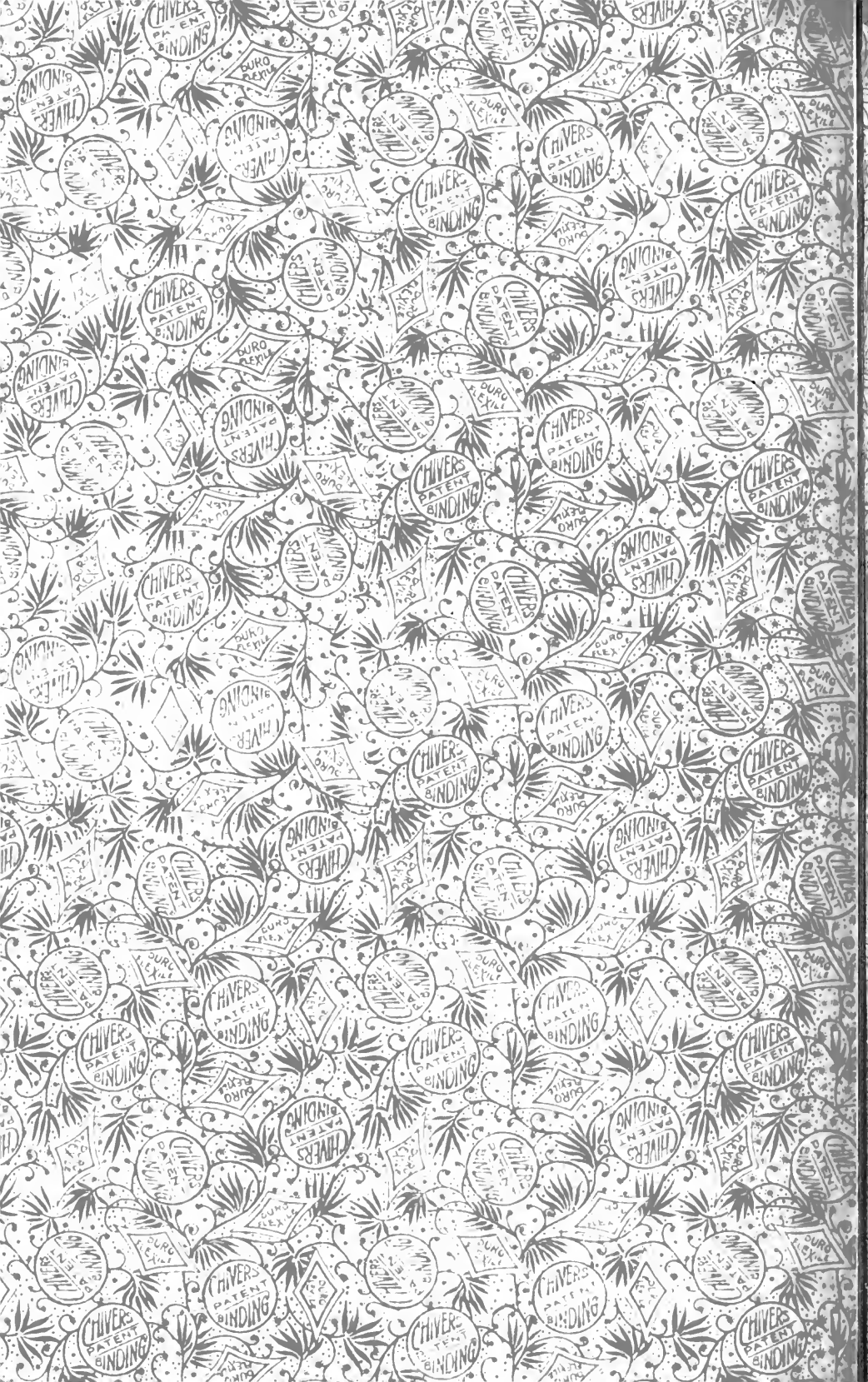
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